GOVERNMENT OF SIERRA LEONE

RESPONSE TO SUPPLEMENTARY INFORMATION REQUIRED FOR THE GOLA-TIWAI COMPLEX NOMINATION

Dear Mr. Alessandro Balsamo and Mr. Clemens Küpper,

UNESCO World Heritage Centre and IUCN Headquarters.

Thank you for your letter of December 19, 2024 regarding IUCN's interim report on its evaluation of the Gola-Tiwai Complex and request for supplementary information. The Government of Sierra Leone was pleased to host the IUCN World Heritage technical evaluation mission in October 2024 and is grateful for the opportunity to respond to the points raised in your letter.

Your requests and the government's responses are as follows:

1. **Clarify through detailed maps the boundaries of the buffer zone for Tiwai Island Wildlife Sanctuary, in line with paragraphs 99 and 132 of the Operational Guidelines. Due to the line thickness of the boundary lines and the scale of the maps provided in the nomination dossier, it currently does not appear to be possible to unambiguously discern the exact location of the buffer zone boundary and the status of the buffer zone in the south of Tiwai Island Wildlife Sanctuary. IUCN suggests a technical meeting with State Party experts to advise on the precisions needed. IUCN would also be grateful to receive the GIS shape files of the boundaries of the nominated property and buffer zone, if available.**

The State Party convened an online technical meeting to discuss IUCN's request and agreed to adjust the line thickness of the boundary lines and scale of the maps in order to clarify the exact location of the buffer zone boundaries especially to the south of Tiwai Island Wildlife Sanctuary.

The corresponding GIS shape files have been collated and will be sent with the electronic version of this letter.

2. **Indicate through maps the potential dynamics of Moa River in relation to the boundaries of the nominated property and its proposed buffer zones, especially in regard to Tiwai Island Wildlife Sanctuary.**

The government regrets that this is not possible with existing data. The most detailed topographic maps available are at a scale of 1:50,000, date from the 1970s, and do not show the river in great detail. At Tiwai and especially downstream of the research station, the river on both sides of the island forms a complex cataract. In the dry season, there are dozens of micro-islands which are submerged during the rainy season. The problem for mapping is that during the rainy season the

cloud cover is such that there is very little, if any remote sensing imagery available. It is theoretically possible that data from satellite SAR (synthetic aperture radar) could be used, but this has not yet been attempted because of the heavy forest cover (which tends to saturate the radar return), the rocks and the dynamic nature of the cataracts. However, we remain available and willing to work with IUCN specialists further on this point at a later date, if possible.

3. **Provide an overview of the implementation of the actions defined in the Interim Management Plan 2023 2025 for Tiwai Island Wildlife Sanctuary and the Interim Management Plan for Gola Rainforest National Park.**

Implementation of the interim TIWS Management Plan is being undertaken on an ad-hoc basis as opportunities arise. Work is currently underway to develop a business plan to define what resources are needed to meet the key objectives of the management plan and where these resources might come from.

Implementation of the Gola Rainforest National Park Management Plan closely follows the requirements of the Gola REDD+ Project validated under the VCS (Voluntary Carbon Standard) and CCBA (Climate, Community and Biodiversity Alliance) standards. However, the updated management plan also incorporates additional objectives relating to park infrastructure, ecotourism, and operational effectiveness. Annual monitoring reports on the implementation of relevant actions are attached in the Annex.

4. **Formally submit, as part of the supplementary information, the new Gola Rainforest National Park Management Plan 2024-2029, which was already shared with the mission team, to ensure that this new management plan is formally registered as part of the nomination dossier.**

Please find as annex the new Gola Rainforest National Park Management Plan for 2024-2029.

5. **Provide the final management plan for Tiwai Island Wildlife Sanctuary, or in case this plan is not yet available, an update on the finalization of this management plan, including a copy of the latest version of the draft and the firm schedule for its final approval and subsequent implementation.**

Kindly find as annex the Interim Management Plan for Tiwai Island Wildlife Sanctuary for 2023-2025.

6. **Provide a summary on how the implementation of these management plans ensure: a. An integrated management across all four nominated component parts; b. Forest restoration in the buffer zone; c. Mitigation of the threats identified in the nomination dossier.**

a. An integrated management across all four nominated component parts.

The integrated management of the three components of GRNP is already assured as a result of the national park structure and management provided by GRC-LG. Since submission of the World Heritage nomination in January 2024, the GRNP and TIWS management teams have been working

more closely together in fulfillment of the September 2022 Memorandum of Understanding between the two sites that was submitted as part of the nomination dossier (Annex 13). As envisioned in the 2022 agreement, plans are under way in particular to coordinate ecological monitoring across TIWS and GRNP in order to fulfill the State of Conservation reporting requirements for natural World Heritage properties, and to coordinate law enforcement between the two sites, especially where their buffer zones overlap to the south of TIWS. Under the authority of the National Protected Areas Authority (NPAA), a joint management plan for the two sites will be developed once the resources are available and the level of coordination between managers on the ground has reached the point where a joint plan can be successfully implemented. We would also like to point out that the development of an integrated management plan common to the four components proposed for inscription is currently underway with the technical and financial support of UNESCO's World Heritage Centre and should be finalized in the coming months.

b. Forest restoration in the buffer zone.

At GRNP efforts are focused on developing community forestry initiatives in the buffer zone to promote sustainable use of forest resources and conservation of ecosystem services. Farmers are also supported to adopt more sustainable land-use practices to minimize deleterious impacts on the forest. Habitat destruction within the boundaries of the national park, through mining or logging, has been successfully reduced to negligible levels and threat mitigation is now more focused on combating hunting.

At TIWS, work on forest restoration within the village territories around the Wildlife Sanctuary has been undertaken by the Environmental Foundation for Africa (EFA) for the last four years. Starting from the modest beginnings of distributing nursery bags, it has grown to over 110,000 trees planted with a survival rate of over 65%. Trees planted include native species and economically important species, including shade-grown organic cocoa. For the future, the managers of TIWS stress that the buffer zone must provide at least the same level of livelihood support to local communities as they enjoy now. It is to be expected, therefore, that the transition from the traditional system of bush-fallow agriculture to a less dynamic economic forest landscape will be gradual.

c. Mitigation of the threats identified in the nomination dossier.

The main threats to the continued integrity of the Gola-Tiwai Complex that were identified in the World Heritage nomination dossier were threats to forest cover from shifting agriculture and the establishment of small-scale commercial oil palm plantations, illegal hunting, and artisanal mining, notably for gold and alluvial diamonds.

Deforestation and illegal hunting within the proposed GTC World Heritage property remain extremely low thanks to ongoing effective law enforcement by GRNP and TIWS managers. The most recent ecological monitoring data indicate that primate densities remain at similar, high densities to those recorded by Oates, Whitesides et al. in the 1980s. No new incidents of artisanal mining were reported in the GTC in 2024. In the GRNP buffer zone and the village territories

surrounding TIWS, completing the transition from traditional methods of shifting agriculture to more sustainable, agroforestry-based practices is a gradual process that depends on local communities seeing for themselves the advantages of such a shift. That process was accelerated by the agreements signed between GRNP and surrounding villages in 2013-14. No such agreements have yet been negotiated with the villages around TIWS but such discussions will take place in coming months (see below for more details). The principle of a TIWS buffer zone and voluntary restrictions on natural resource use within them were agreed by villagers in agreements signed in December 2022.

Both Tiwai Island and Gola Rainforest National Park are collecting data from patrols (by Eco guards in the case of Tiwai and rangers in the case of GRNP) using the SMART Mobile App and associated SMART database. These data collection systems are based on the same underlying data model, which facilitates integrated data collection on wildlife and threat observations.

7. **In addition to these factual points, the Panel noted with concern that the buffer zone for Tiwai Island Wildlife Sanctuary is very narrow compared to the buffer zone of the other nominated component parts, and thus appears to provide only limited protection against impacts from fisheries, pollution or invasive alien species. Therefore, the Panel would be grateful if the State Party could indicate their willingness to:**
   a. **Expand the buffer zone of Tiwai Island Wildlife Sanctuary to provide a similar layer of protection as the buffer zones of the other nominated component parts;**
   b. **Explore options to strengthen the monitoring of threats to the nominated property and buffer zones, including through further strengthened engagement with local communities.**

The State Party kindly registers and expresses its willingness and readiness to engage local communities around TIWS to secure an extension of the buffer zone agreed in December 2022 that consists of the bed of the Moa River.

The discussions to extend the boundary of Tiwai are being undertaken, but this is a delicate matter that cannot be rushed, as time is needed to allow the communities to understand the benefits but also the restrictions that would be involved in such an extension. Since two villages immediately to the south of TIWS across the Moa River are already located within the 4km GRNP buffer zone, the government is optimistic that the six other villages concerned will be willing for the TIWS buffer zone to be extended as proposed.

It is kindly to be mindful of the readiness at the administrative and strategic levels, and at the practical and operational level on expanded buffer zone for Tiwai, is being negotiated, but this will take time.

Kindly note that the original buffer for Tiwai is narrow, but has the advantage of being unambiguous and not needing to be marked.

The original buffer zone proposed for TIWS, while narrow, had the advantage of being unambiguous and of not needing to be marked. Similarly, the restrictions on extractive natural

resource use agreed with local communities were clear, easily enforceable, and could be applied without significant additional input from protected area managers. Supporting communities in an extended TIWS buffer zone to move away from shifting agriculture to more sustainable agroforestry practices will require additional extension work with target communities by EFA and its partners.

Since receipt of the letter from IUCN requesting supplementary information, the State Party, as a show of its commitment to the World Heritage Convention and willingness to expand the buffer, immediately engaged various parties involved, starting with a webinar with the IUCN team for clarifications, followed by a strategic meeting involving the Ministers, PCMP, M.P's, national coordinating committee members, to convey the information and create a roadmap to collate the needed information with a key action for the authorities to convey the information to their communities of particularly the possibility of an extended buffer, as well as the need to send a team on the ground to further educate the people on the need for an extended buffer which would invariably benefit them as, as protectors of the elements and values, they would also be protected (kindly see attached report with pictures for ease of reference).

The following engagements were done when a team comprising officials from the Ministries of Tourism and Cultural Affairs, Environment and Climate Change, Njala University and Environmental Foundation for Africa (EFA) engaged the eight communities in two meetings held in Potoru and Baoma Koya on the 7th and 8th February, 2025 and respectively (kindly see attached summary of discussions with pictures for ease of reference).

The State Party further expresses readiness to engage constantly with right holders, community stakeholders to ensure sustained monitoring of threats such as fisheries, pollution or invasive alien species that may impact on the integrity and the elements in and around the nominated property. In view of the above the following options would be seen feasible: The sense of knowing what is happening, but in clarifying the roles and responsibilities of those capable of acting.

As a next step following the February meetings with local communities, the State Party expresses its readiness to continue its engagement with the relevant rights holders and community stakeholders to ensure the sustained reduction and monitoring of threats such as deforestation, unsustainable fisheries or invasive alien species and unauthorized mining that may impact on the integrity and Outstanding Universal Value of the nominated property. Formal agreement will also need to be reached on the roles and responsibilities of the various stakeholders involved in implementing and enforcing an extended buffer zone at Tiwai, taking into consideration the strong, community-based governance structure of the Tiwai Island Administrative Council (TIAC) as managers of TIWS. Those stakeholders include local Village, Section and Paramount Chiefs, local police, the National Protected Areas Authority, the Ministry of Culture and Tourism, the Ministry of Land, as well as the Environmental Foundation for Africa (EFA) which has led engagement on the ground with local communities since 2002. Whatever agreements are reached must be compatible with the relative roles of traditional and modern authorities in southeastern Sierra Leone, and of local vs national entities.

Should undesirable activities be reported to the traditional authorities (a Section Chief or Paramount Chief) or to the modern authorities, and if to the modern authorities, do the police or the NPAA or the EPA or the Ministry of Tourism or whoever, have resources to act?, could be an option. We also need to "navigate" the local politics, if, say the Ministry of Lands receives information of activity in the buffer zone and acts, it should be mindful of potential undermining of the Chiefly system that may generate resistance, as well as the possibility of strengthening of by-laws established by the local authorities against potential threats.

Notwithstanding these challenges, the State Party reiterates its willingness to engage with all the relevant stakeholders to expand the TIWS buffer zone to provide a similar layer of protection as the buffer zones of the GRNP and to explore options for strengthening the monitoring of threats to the Gola-Tiwai Complex and its buffer zone, especially through continued engagement with local communities. A timetable for the full process will be communicated to IUCN and the World Heritage Centre as soon as it is available and the outcomes reflected in the integrated management plan for the GTC when it is developed.

However, more options will be suggested during the complementary engagement with relevant communities when developing the integrated management plan for the Gola- Tiwai Complex.

State Party of Sierra Leone.

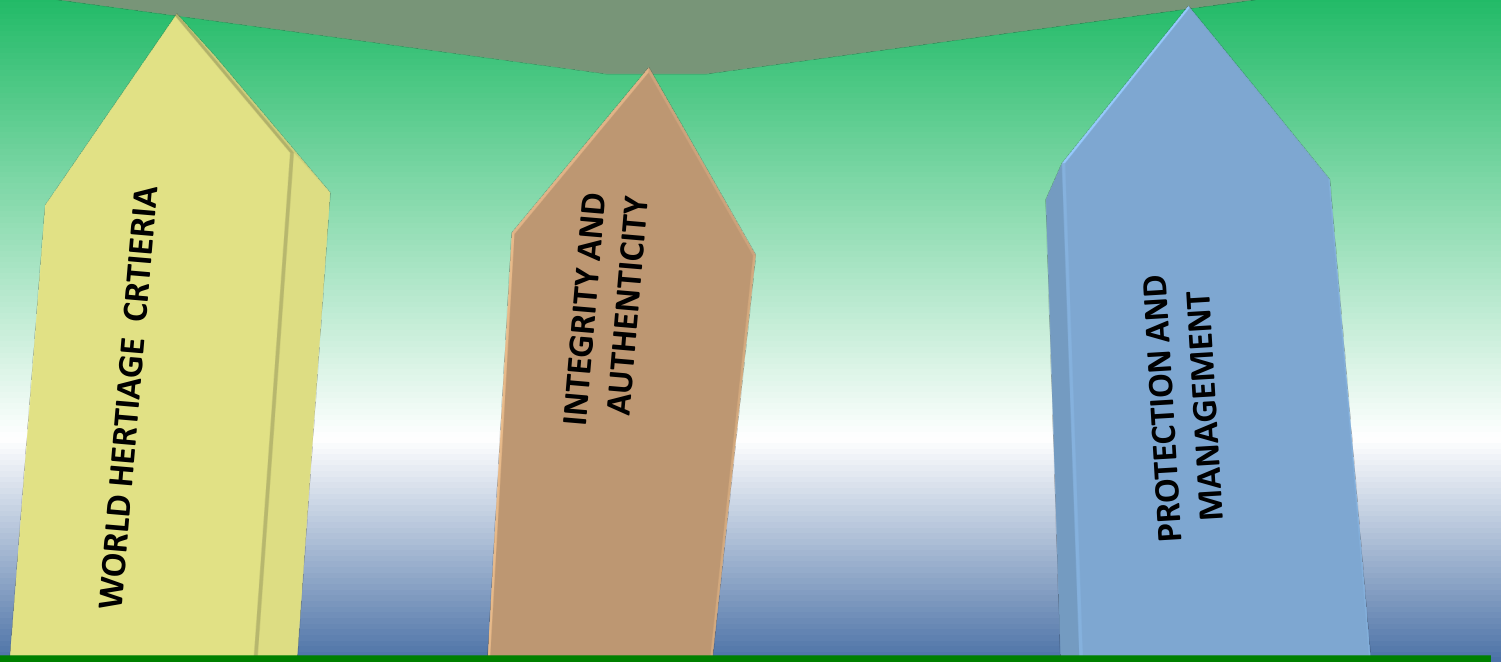
THE GOLA-TIWAI COMPLEX SUBMITTED FOR INSCRIPTION ON THE WORLD HERITAGE LIST- SUMMARY OF REQUIREMENTS, COLLECTIVE RSPONSIBILITIES AND ACTIONS

BY:
ISHMEAL ABU KAMARA

The World Heritage Concept

OUTSTANDING UNIVERSAL VALUE (OUV)

cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity.



Gola- Tiwai Complex- a poster of the view and summary of benefits

- Double click to open document

WHS_POSTERS_V5.pdf

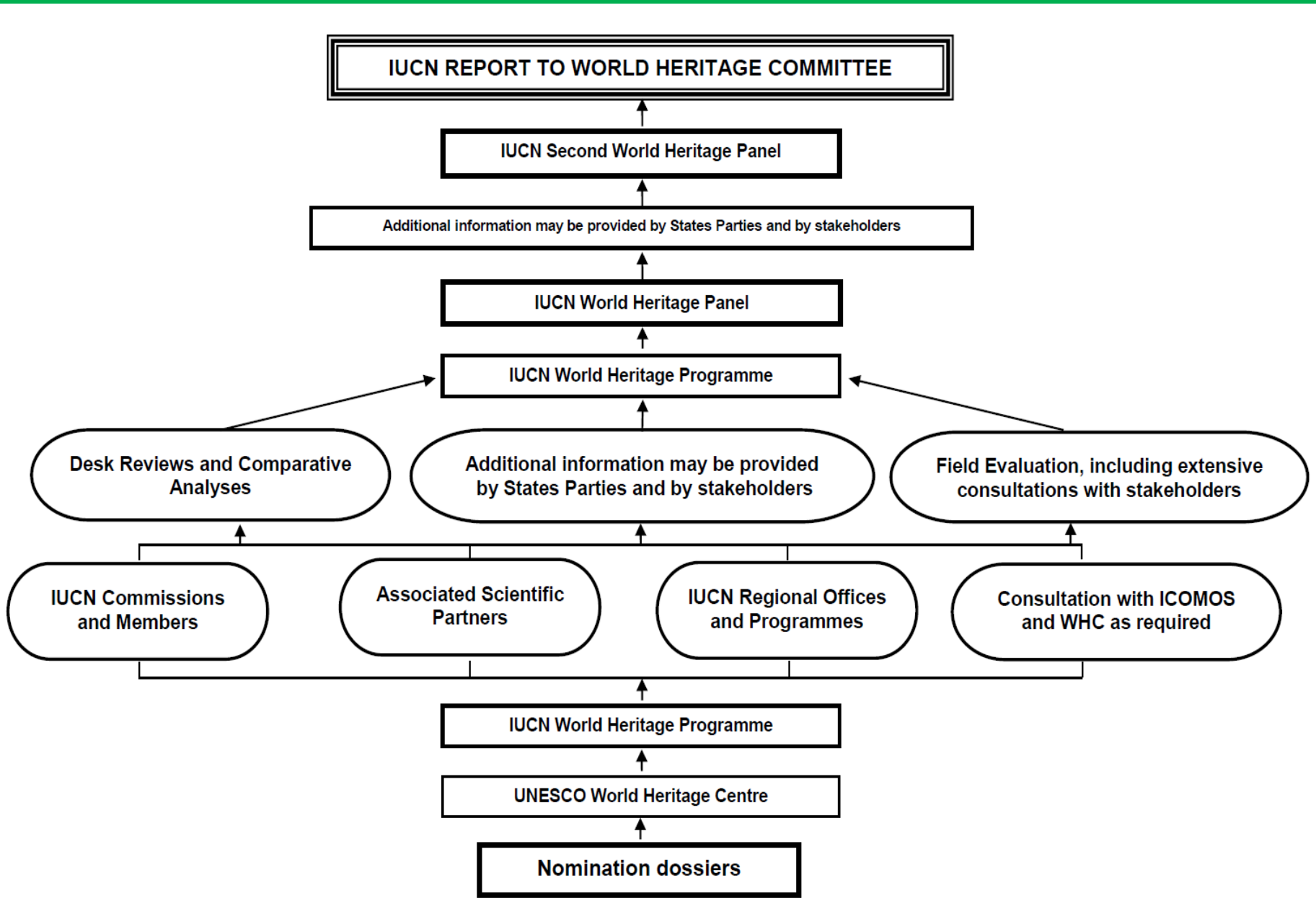
INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE (IUCN) WORLD HERITAGE STRATEGY

Six priorities:

1. **Conservation:** delivering global conservation action and outcomes
2. **Communities and constituency:** delivering results for people
3. **Culture:** promoting innovation by linking nature and culture
4. **Communication:** inspiring success and engagement
5. **Capacity:** increasing the ability to deliver through World Heritage
6. **Credibility:** upholding exemplary standards

> Implementation needs to be regional (and national)…

IUCN EVALUATION PROCESS

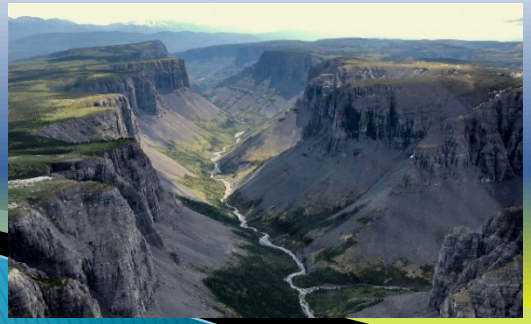


KEY THINGS TO REMEMBER FOR NOMINATED SITES

- Distinctiveness: uniqueness
- Wholeness: functioning as self contained
- Intactness/naturalness: No form or level of human impact
- Integrity
- Dependency/irreplaceability: Critical to key species
- Diversity of species, habitats and natural forms

Australia

Canada



Indonesia

Mexico

Criteria for inscription of Gola- Tiwai Complex

- (ix) to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;
- (x) contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of Outstanding Universal Value from the point of view of science or conservation.

- To be deemed of Outstanding Universal Value, a property must also meet the conditions of integrity and must have an adequate protection and management system to ensure its safeguarding.

Process for including a site on the World Heritage List

1 The State Party

- Establishes its Tentative List
- Selects the priority site
- Prepare the nomination dossier and management plan

2 World Heritage Centre

- Confirms the technical and administrative compliance of the nomination dossier
- Forwards the nomination dossier to the Advisory bodies or returns it to the State Party

3 Advisory bodies

- Send an expert
- Assess the site and submit a report

4 The World Heritage Committee (21 membres)

- Decides to inscribe, not to inscribe, to return or to defer inscription

5 The State Party

- Conservation + monitoring

OPERATIONAL GUIDELINES (OG) OF UNESCO CONVENTION AND WORLD HERITAGE PROPERTIES

- This provides guide on how to manage pressures and potential threats- **pressures of mining, poaching, deforestation, burning of bushes destroying wildlife habitat, population increase and urban development** around property.

- OG- paragraph 95, "protection and management of World Heritage properties should ensure that their OUV, including the conditions of integrity and or authenticity at the time of inscription, are sustained or enriched over a time.

Contd.

- A regular review of the general state of conservation of properties, and thus also their OUV's, shall be done within a framework of monitoring processes for WHP, as specified within the OG".
- OG 97
- "All properties inscribed on the World Heritage List must have **adequate long- term legislative, regulatory, institutional** and/ or traditional protection and management to ensure their safeguarding. This protection should include **adequately delineated boundaries.**

Contd.

- Similarly, State Parties should **demonstrate adequate protection at the national, regional, municipal, and/ or traditional level for the nominated property.** They should append appropriate texts to the nomination with a clear explanation of the way this protection operates to protect the property”
- OG 98- talks about measures- regulatory and legislative- to assure the protection of property from pressures or changes that might affect the Outstanding Universal Values (OUV), **State Pasty ensure full and active implementation of measures**

CONTD.

- OG 108-Management plan or other management systems, how OUV is preserved through participatory means
- OG 110- Cultural and natural contexts and factors, impact assessment conduction
- OG 112- Cycle of short, medium and long-term actions to protect, conserve and present, an integrated management, maintenance of OUVs… management of the wider setting

BUFFER AND PEOPLE AND EFFECTIVE MANAGEMENT

- The people are the ones that contribute to environmental sustainability, environmental health and wellbeing are also protected and enhanced within World Heritage Properties, their buffer zones and wider settings.
- Effective management will contribute to sustainable development, through harnessing the reciprocal benefits for heritage, communities and society as a whole.
- The focus is on harnessing the cultural and biological diversity, ecosystem services- tourism, culture and arts- and benefits for people that contribute to environmental sustainability, protection and enhanced state of the World Heritage Properties (WHP), their buffer zones and their wider settings.

Contd.

- Ensure environmental, social, cultural and heritage impact assessment tools when undertaking planning in sectors such as urban development, transport, infrastructure, mining and waste management, applying sustainable consumption and production patterns and promoting the use of renewable energy sources

- Other decisions of the World Heritage Committee borders on: long- term strategy on sustainable financing with adequate human, material and financial resources to support effective management of the World Heritage property

Thank you for your attention

ISHMEAL ABU KAMARA

ASSISTANT DIRECTOR OF CULTURE, CREATIVITY AND INNOVATION

FOCAL PERSON, UNESCO PERIODIC REPORTING AND HERITAGE MATTERS

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Tel: 076420218

Gola REDD+ Project

Monitoring Implementation Report (MIR) 2023

Progress made towards the Biodiversity Monitoring Output, Outcome & Impact Indicators on ecosystem, landscape, and species level

Annex 2 to the Project Implementation Report (PIR)

Prepared by:

Mustapha Wai (Superintendent – Park Operations)
Amadu Jusu (Superintendent – Community Development)

Reviewed by:

Ryan Wilkie & Jenna Barker (Technical Advisors - Research & Monitoring)

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Overview

The Gola REDD project is implementing a series of programmes as set out in its validated CCB and VCS project description documents. The rationale for the output, outcome, and impact indicators used to assess the project are set out in two documents: *Henman 2013 - CCB Social Monitoring Plan;* and *Hillers & Tatum-Hume - Biodiversity Monitoring Plan for the Gola REDD Project.*

The first part of this Annex to the Project Implementation Report (PIR) provides details of progress against the 17 Biodiversity Monitoring Plan output and outcome indicators for the project verification period 1st January - 31st December 2023. The second part of this Annex provides details of progress against the 9 Biodiversity Monitoring Plan impact indicators on ecosystem, landscape, and species level (including High Conservation Value species) for the period 1st January - 31st December 2023.

Throughout the project, the teams responsible for each programme (Park Operations, Community Development, and Research & Monitoring) demonstrate and communicate progress towards their indicators by producing quarterly reports using fixed templates. The information contained in this Annex document is largely amalgamated from the quarterly reports, with some additional analyses, explanations, justifications, and illustration. Information on impact indicators can partly also be found in more detailed research reports, referred to in this Annex.

The documentation required for each indicator is identified in sections 3.A., 3.B. and 3.C. of the document *Hillers & Tatum-Hume – Biodiversity Monitoring Plan for the Gola REDD Project*, and all such documentation is indexed and filed at the GRC-LG office.

Park Operations Department

Park Protection Programme

The Park Protection programme is intended to control illegal and damaging activities within the Gola Rainforest National Park (GRNP). The activities of the programme principally relate to the implementation of patrols of the national park by specialised teams of well trained and equipped Rangers. These patrols are tasked with enforcing the laws that govern the national park through detecting, recording, and deterring rule-breaking, and by facilitating the rehabilitation or punishment of offenders. The GRNP is partitioned into 10 sectors (see Fig. 1 below) and patrols are planned strategically to achieve good overall coverage and to address specific threats, as identified from previous patrol data or through intelligence received from forest edge communities. The GRC-LG Rangers are divided into 2 units, each consisting of 3 teams of 5 Rangers, with each unit following a rotation of two weeks on duty followed by one week off duty. Deployments of the 2 units are staggered such that there is always at least one of the units on duty in the national park. Methods are set out in detail in the document *Standard Operating Procedures for GRNP Park Protection.* It is expected that Park Protection activities shall be on-going and relatively consistent throughout the duration of the project.

The programme is administered by Gola Rainforest Conservation (GRC-LG) Park Operations department with support from the GIS and Data Manager. Hard copies of patrol reports are filed in the Park Operations office - reports consist of an activity plan; patrol day report forms; people encountered datasheets (if applicable); a patrol map; a GPS data quality reporting form; and incident reports (if applicable). For each Ranger patrol, GPS data on patrol tracks and observations of illegal activity and important wildlife are entered into a customised SMART database by the GIS and Data Manager. SMART (Spatial Monitoring and Reporting Tool) is specialised conservation software for the recording, analysis, and reporting of Ranger based data. Monthly SMART reports are generated and used by Park Operations Supervisors to strategically plan further patrols.

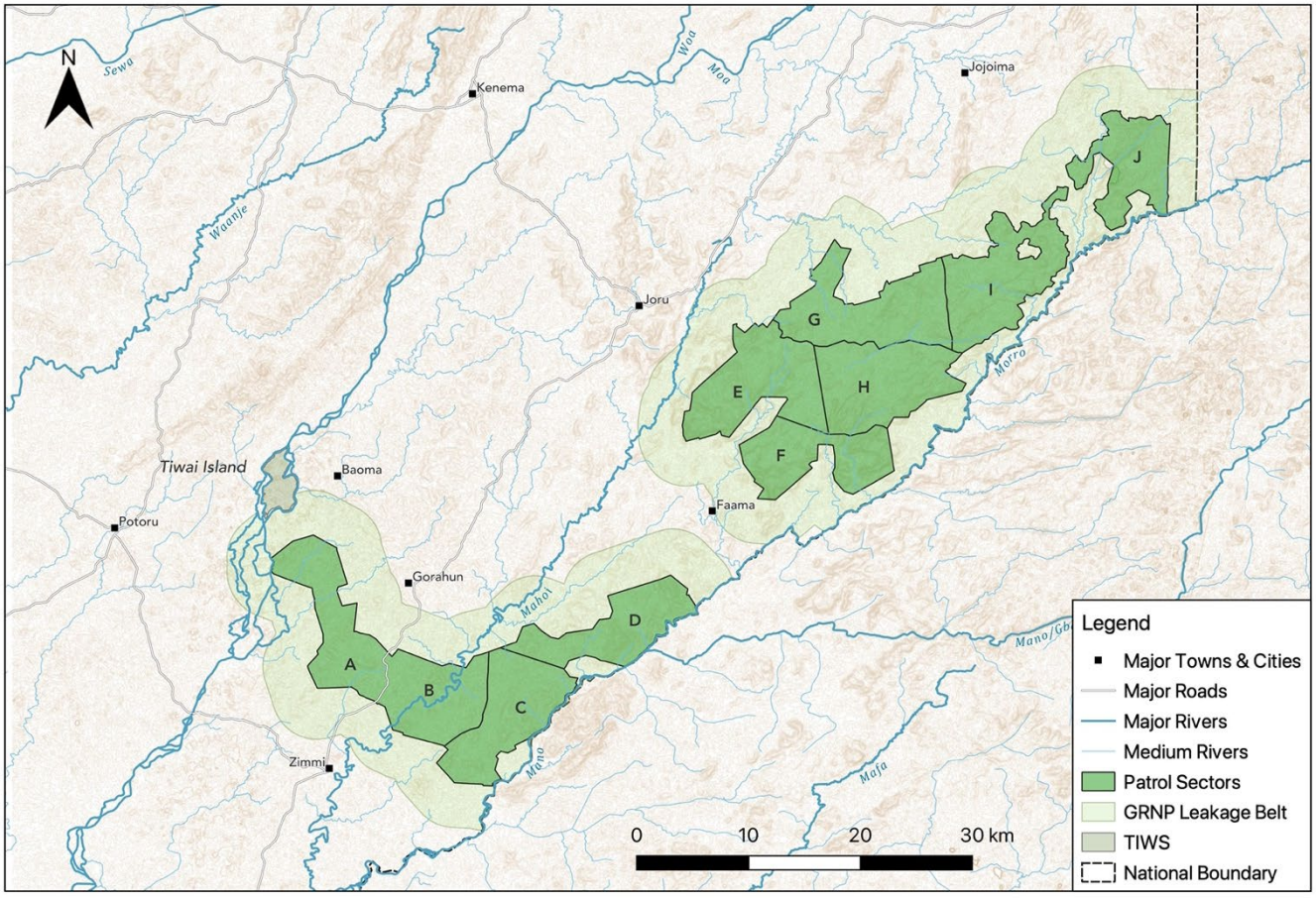

Fig 1. Map of the Gola Rainforest National Park showing different patrol sectors.

Park Operations Output and Outcome Indicators

The rationale for the indicators described in this section is set out in section 3.A. of *Hillers & Tatum-Hume – Biodiversity Monitoring Plan for the Gola REDD Project.* They relate specifically to the Park Protection and Boundary Demarcation programmes implemented by the GRC-LG Park Operations department.

Indicator 1 (output): Number of Ranger patrols carried out

During the reporting period, 121 Ranger patrols were planned and implemented across three blocks of the National Park: Gola South, Central and North. In addition, 28 Joint Security patrols were organized with the Sierra Leone Police (SLP), and the Republic of Sierra Leone Armed Forces (RSLAF) to strengthen protection of the National Park and to provide armed support to the unarmed Ranger forces of GRC-LG. A summary of patrol effort by sector is shown in Table 1 below.

Table 1. Summary of patrol effort by sector from January to December 2023

Sector	Number of Patrols	Number of Days	Distance (km)	Average Patrol Distance (km)
Sector A - Baoma Koya	9	62	760	84.44
Sector B - Sileti - Pewa	7	54	655.2	93.6
Sector C - Wunde	7	50	605	86.43
Sector D - Baoma Nomo	38	276	2675.7	70.41
Sector E - Lalehun	12	81	811.6	67.63
Sector F - Quadima Nomo	9	59	586.6	65.18
Sector G - Patama	9	71	800.8	88.98
Sector H - Kpandebu - Konnela	8	65	786	98.25
Sector I - Taiama - Wangikor	15	115	1331	88.73
Sector J - Fobu	7	58	569	81.29
Tiwai Island	0	0	0	0
Total	**121**	**891**	**9,580.9**	**79.18**

Indicator 2 (output): Distance (km) patrolled by ranger patrol teams

During the reporting period, GRC-LG Ranger teams patrolled a total distance of 9,580.9 km and the Joint Security teams patrolled a total distance of 1,815 km within the project area boundary which clearly shows that there is high level of protection of the National Park.

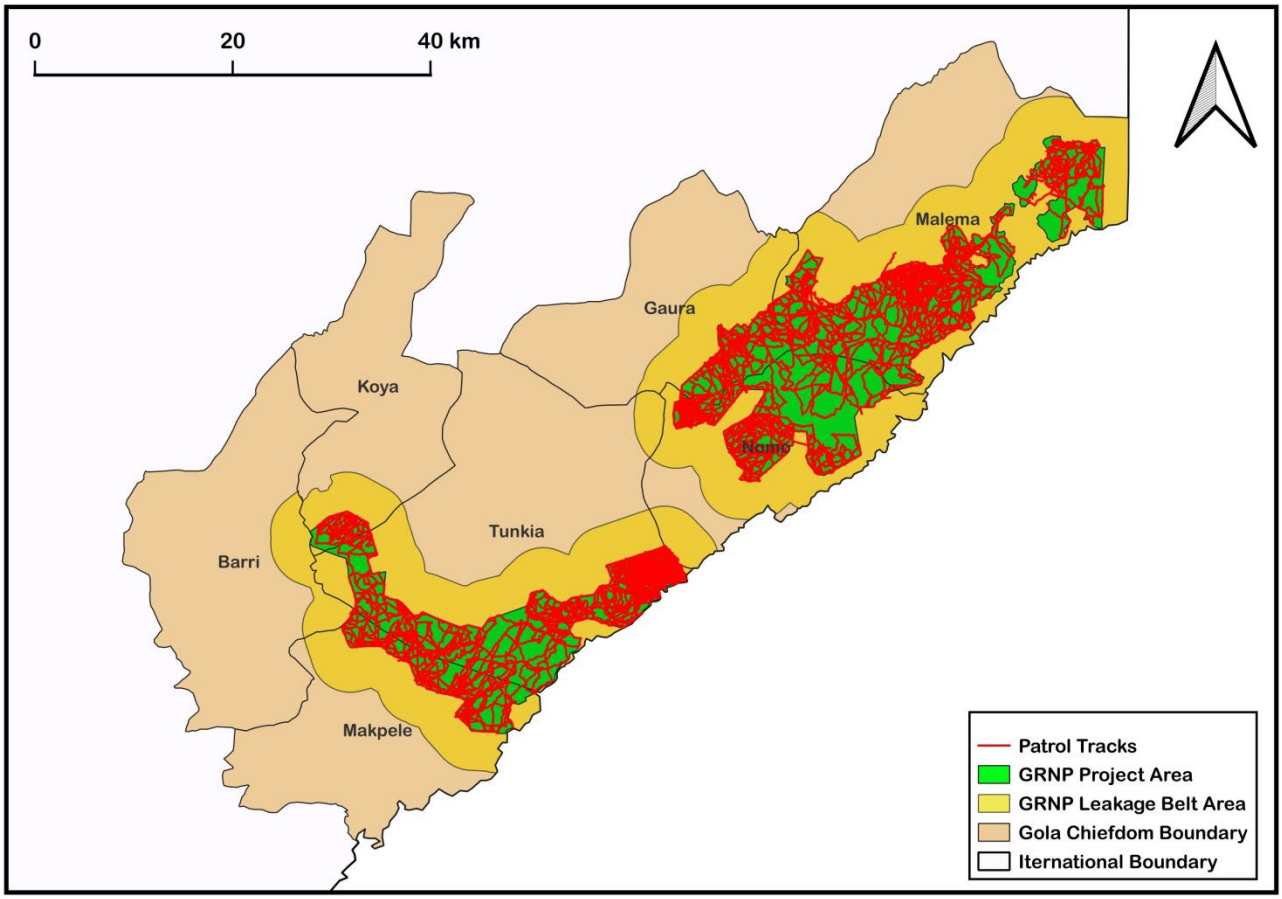

Fig. 2. Patrol Routes covered from 1st January to 31st December, 2023

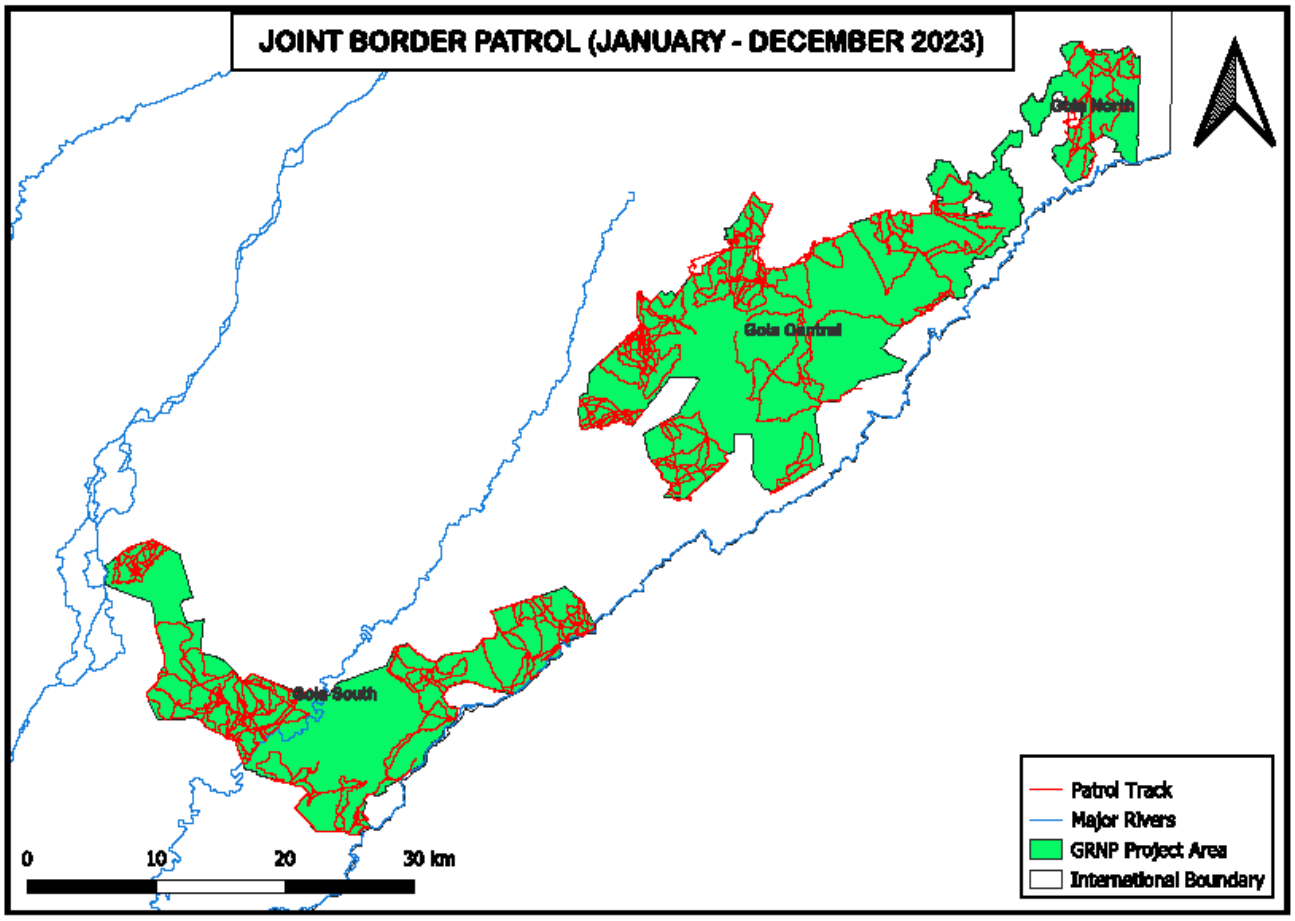

Fig. 3. Joint Patrol Routes covered from 1st January to 31st December, 2023

Indicator 3 (output): Proportion of the project area covered by ranger patrols

Measured as the proportion of 1km UTM grid-squares visited by at least one patrol. During the reporting period, GRC-LG Ranger teams patrolled within 898 of the 910 km UTM grid squares that overlay the project area (i.e. 98.6%). This is a significant improvement from 87% coverage in 2022 and 74% in 2021 demonstrating the impact of improved patrol planning and increased capacity of the ranger team following the recruitment of additional rangers in the first quarter of 2023.

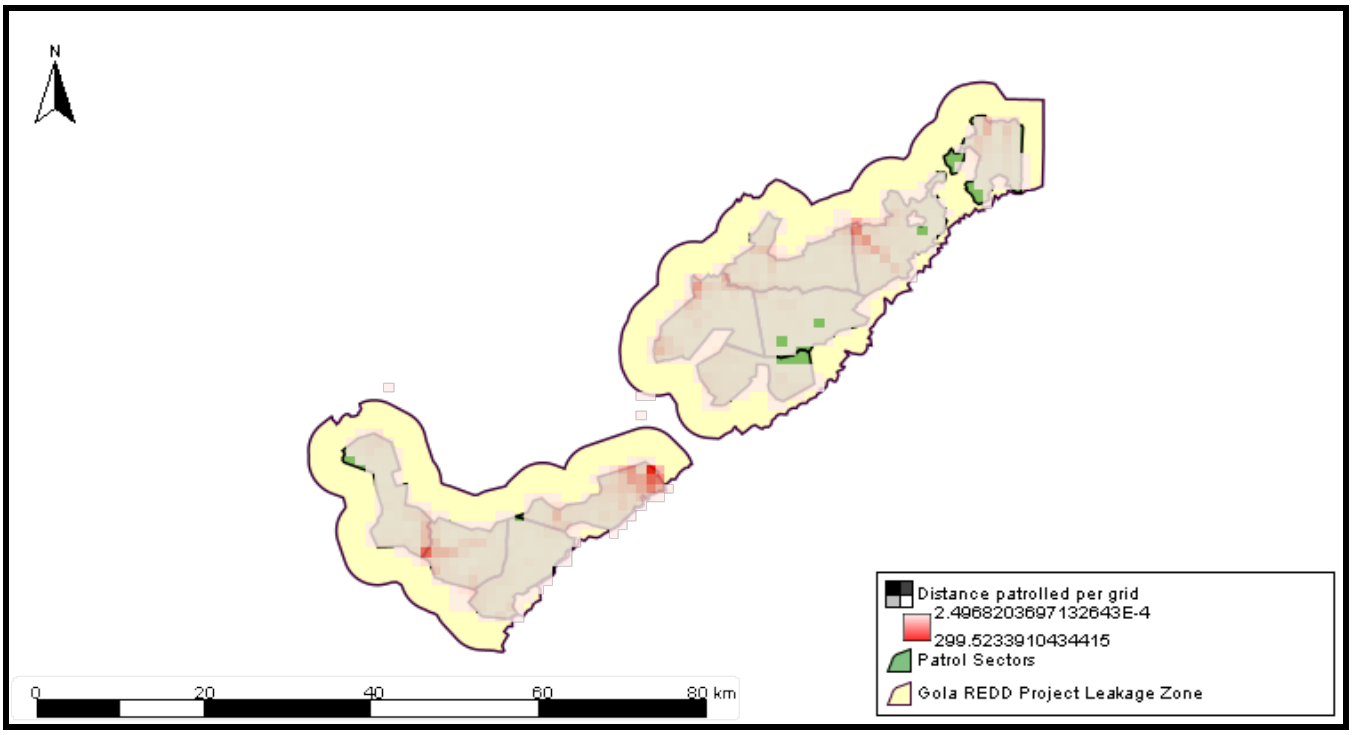

Fig. 4. Distance patrolled within grid squares from 1st January to 31st December, 2023. Number of 1 km UTM grid squares visited = 898; Total number of 1 km grid squares= 910; Proportion of UTM grid square = 0.98

Indicator 4 (output): Capacity building of forest rangers

During the reporting period, GRC-LG Rangers participated in three (3) training sessions as part of staff capacity development, to improve on their knowledge, skills and performance in discharging their roles and responsibilities effectively and efficiency. The refresher trainings were mainly focused on Ranger code of conduct, Regulations and Rangers Mandate. The SMART Mobile training aimed to improve collections of reliable and accurate data using the SMART Mobile Phone. In addition, trainers were hired from the Southern African Wildlife College in South Africa through the Illegal Wildlife Trade Challenge Fund (IWT) to train 50 Rangers in Sierra Leone and Liberia, 20 from Sierra Leone and 30 from Liberia in Field Ranger Advance. The training were divided into two (2) batches twenty five (25) each and it was practically oriented where rangers were taught with different patrol skills and techniques such as patrol planning and execution, Basic Survival skills, Self Defence and more but to name few. All the trainings took place in Lalehun at the GRC-LG substation in the Gaura Chiefdom, Kenema District Sierra Leone. Details of the training events are shown in Table 2.

Table 2. Training events involving GRC-LG Rangers in 2023

Training Event	Brief Description	Start Date	End Date	Number of Staff	Documentation (Ring file name and Number)
Annual Refresher Training	Basic training for new recruits and in-service refresher training for existing staff to better understanding of the code of conduct and the mandate of Protected Area Rangers.	16th March, 2023	21st March, 2023	52 Rangers	HRM file
SMART Mobile Training	WABiLED project provided training to GRC-LG rangers on how to use the SMART Mobile App to collect reliable and accurate data during patrols.	10th April, 2023	14th April, 2023	47 Rangers	HRM file
Advanced Field Ranger Training	The Southern African Wildlife College through the Illegal Wildlife Trade challenge fund (IWT-CF) provided a training session on Advanced Field Ranger which is to improve on their skills and performance on park protection.	24th April, 2023	15th May, 2023	20 Rangers	HRM file
SMART Database Training	3-day introduction to patrol data management in SMART Desktop App provided by the WABiLED project	12th Sept 2023	14th Sept 2023	1 GIS Specialist	HRM file

Indicator 5 (output): Distance (km) of project area boundary re-brushed by boundary officer teams.

During the reporting period, the Boundary Officer worked with casual labourers from Nomo, Tunkia, Gaura and Malema Chiefdom to re-brushed 120 km of the project area boundary. Specifically, 84 km of the Gola Central boundary and 36 km of the Gola North boundary were brushed respectively.

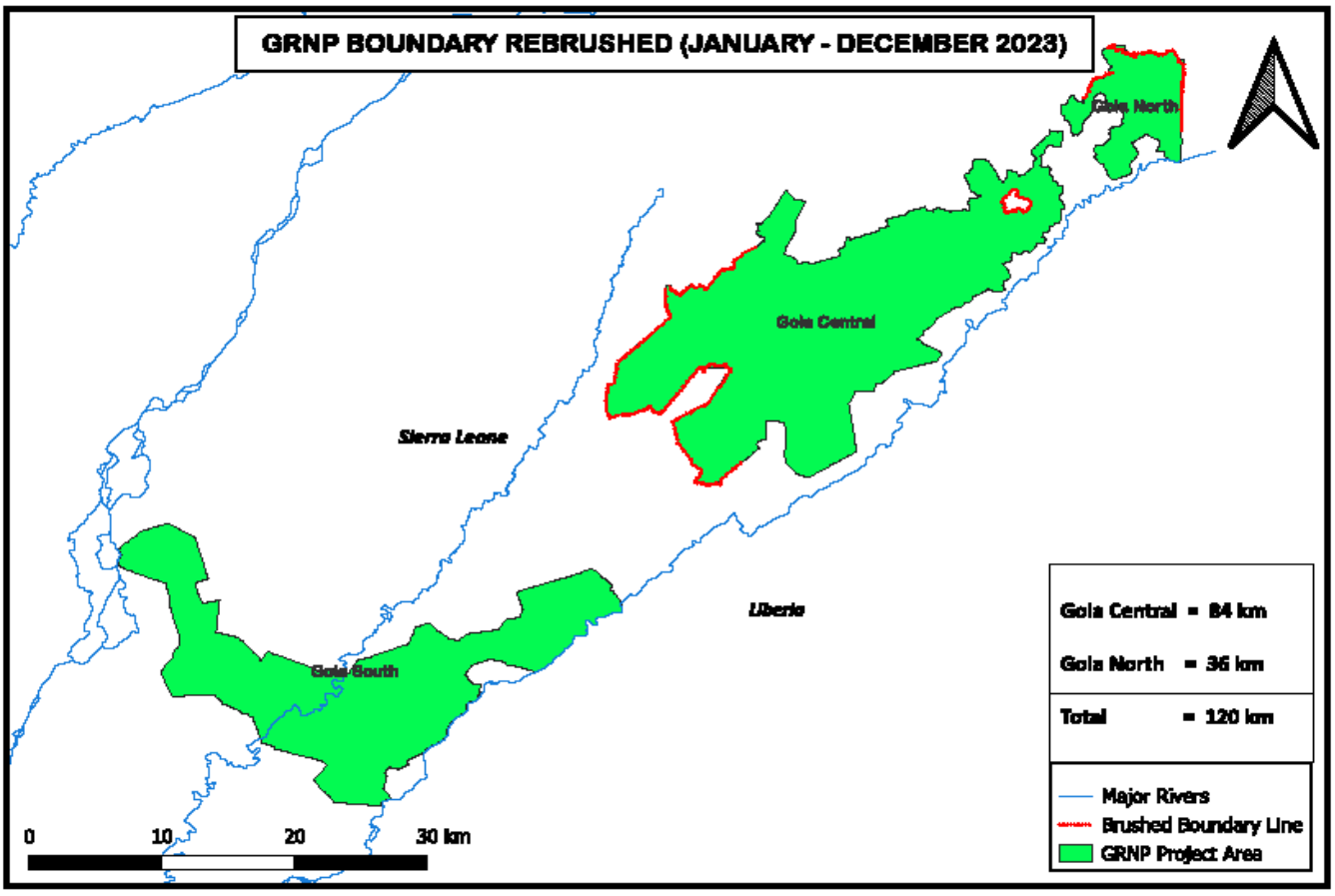

Fig. 5. Location of re-brushed boundary line in 2023

Indicator 6 (output): Number of concrete pillars erected along project area boundary

During the reporting period, the Boundary Officer worked with casual labourers from Malema Ngieya and Wagikor villages in the Malema Chiefdom Gola Central to erect 20 concrete pillars at boundary corner points to demarcate the Wagikor enclave.

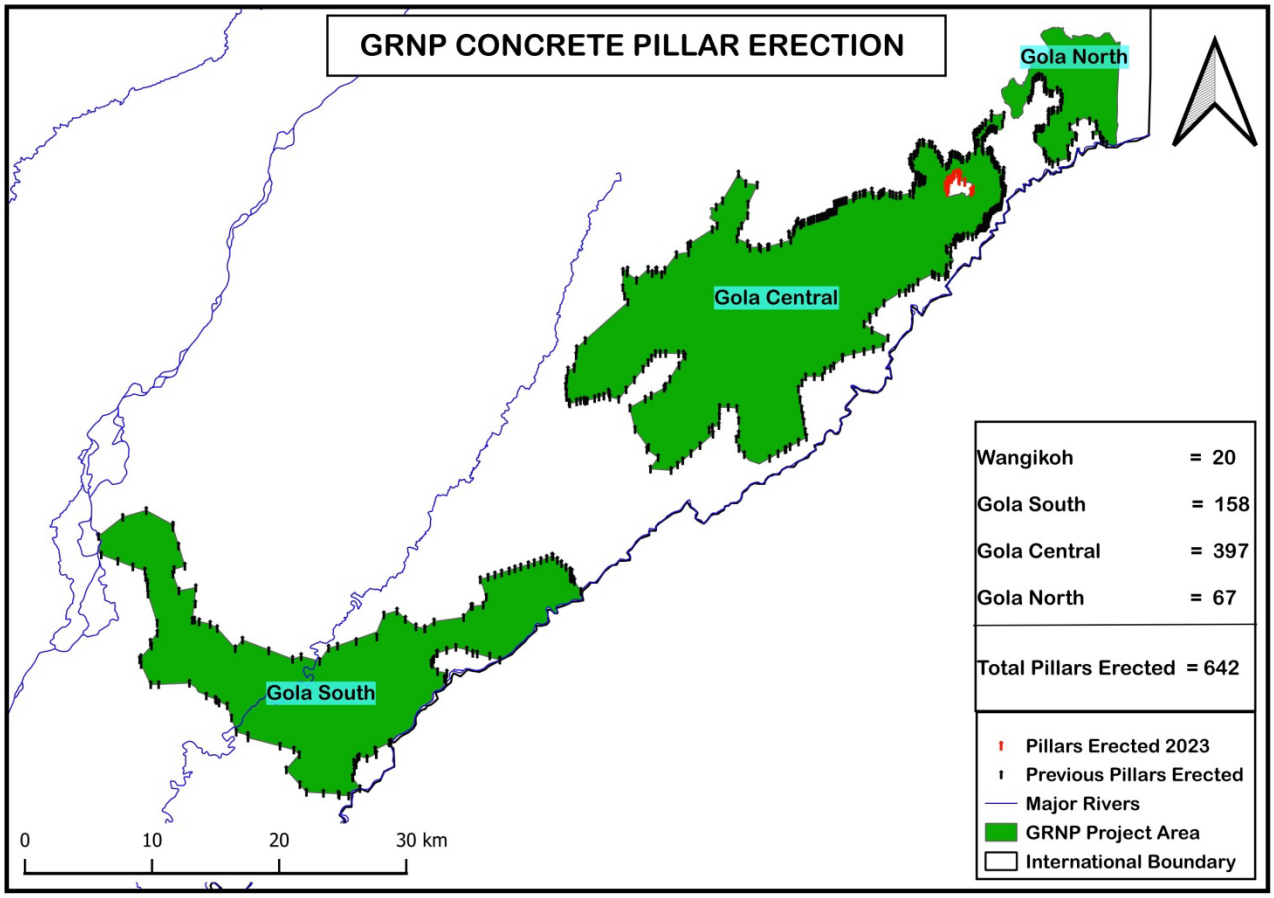

Fig. 6. Location of boundary pillars erected in 2023 (in red) and existing boundary pillars (in black).

Indicator 7 (output): Number of *Heritiera sp.* seedlings planted on rehabilitated mining sites

During the reporting period, no rehabilitation/restoration of mining sites was carried out, as there were no reports of major new mining activity in the project area. As a result no Heritiera Spp. Seeding were planted on mining sites.

Indicator 8 (outcome): Decrease in frequency of observations of illegal activity within project area

During the reporting period, the most common observations of illegal activity made by Ranger patrols within GRNP were signs of poaching with guns (54), signs of logging (19), signs of recent mining (12), People encountered engaging in illegal activity (2) and signs of poaching with snares (29) as shown in Table 3. below.

Table 2. Summary of observations of illegal activity by sector recorded by ranger patrols during 2023

Sector	Number of Patrols	Distance (km)	People engaging in illegal activity	Signs of poaching with guns	Signs of poaching with snares	Signs of logging	Signs of recent mining	Signs of mining (old)
Sector A Baoma Koya	9	760	0	2	1	0	0	0
Sector B Sileti - Pewa	7	655.2	2	0	3	0	0	0
Sector C Wunde	7	605	0	2	1	0	0	0
Sector D Baoma Nomo	38	2675.7	0	24	3	2	8	29
Sector E Lalehun	12	811.6	0	7	5	0	0	0
Sector F Quadima Nomo	9	586.6	0	12	4	10	0	1
Sector G Patama	9	800.8	0	4	5	3	4	7
Sector H Kpandebu - Konnela	8	786	0	2	2	1	0	1
Sector I Taiama - Wangikor	15	1331	0	1	2	0	0	0
Sector J Fobu	7	569	0	0	3	3	0	0
Tiwai Island	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Totals	**121**	**9580.9**	**2**	**54**	**29**	**19**	**12**	**38**

A comparison between encounter rates for different illegal activities in 2022 and 2023 is represented in Figure 7 below. Encounter rates were used over simple numbers of observations to account for differences in patrol effort between years. This data suggests that mining activity has decreased compared with the previous year and hunting with guns has decreased only slightly, while logging has remained relatively constant, and snaring has increased slightly.

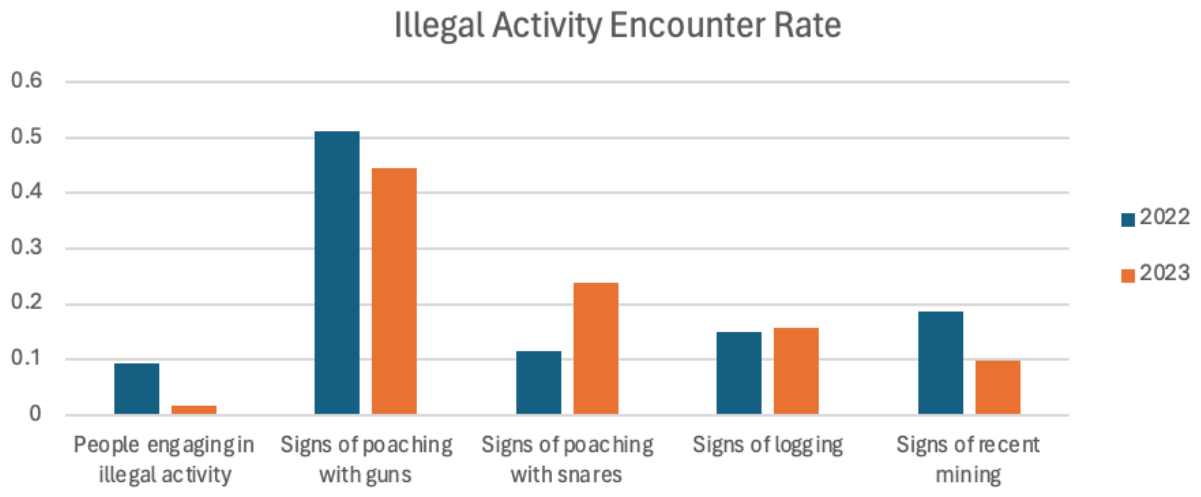

Fig. 7. Comparison of illegal activity encounter rates (number of observations per patrol) between 2022 and 2023.

Indicator 9 (outcome): Integrity of project boundaries maintained

During the reporting period, the long outstanding boundary dispute between GRC-LG and the Fobu/Bendu and Jenneh communities in the Malema Chiefdom has been resolved amicably through consultative meeting held with all key stakeholders from Fobu, Bendu, Giema and Jenneh. Unfortunately, the Jenneh community continued to disagree with the gazette boundary area. Furthermore, it was reported by the ranger teams that agricultural encroachment such as farming has taken place closer to the park boundary at Jenneh axis Gola North in the Malema chiefdom which is a threat to the project boundary. However, re-brushing of the boundary line from Fobu to Bendu axis has now been completed. Details are shown in Table 4 below.

Table 4. On-going and resolved boundary disputes.

Boundary Village	Description of dispute	Resolution reached?	Description of resolution	Documentation (ring file name & doc. number)
Fobu/Bendu, Malema.	Disagreement with the gazetted project area boundary line	Yes, a meeting was held in Fobu with representation from the Paramount Chief and other key stakeholders from the affected communities where it was resolved amicably.	The boundary was agreed with the gathered stakeholders and the boundary line was cleared. Compensation was agreed for affected farmers.	Documented
Jenneh, Malema	Disagreement with the gazetted project area boundary line and agricultural encroachment.	Dispute is ongoing	N/A	Not Documented

Indicator 10 (outcome): Carbon stocks increase in project area

Details of baseline carbon stocks for the project are described in the document *'Tatum-Hume et al 2013b – Carbon baseline synthesis report'.* Re-measurement of carbon stocks is scheduled for every 3rd verification event with the next in 2023/2024.

Community Development Department

Community Development Programme

The Community Development Programme of GRC-LG is focused on the implementation of livelihood projects and other activities with forest-edge communities. The aim of these activities is to improve income and yields from established croplands and promote alternative livelihood options thereby reducing deforestation pressures. Environmental awareness raising and land use planning activities complement the livelihood activities and work towards empowering local communities to sustainably manage their natural resources.

Community Development Output and Outcome Indicators

The rationale for the indicators described in this section is set out in more detail in section 3.B. of *Hillers & Tatum-Hume – Biodiversity Monitoring Plan for the Gola REDD Project.* They relate to the Co-management & Land Use Planning, and Environmental Awareness & Education Scholarships programmes that are principally administrated by the GRC-LG Community Development department, with assistance from the Research & Monitoring Department (e.g., with species specific awareness raising events). The respective overviews and implementation status of these programmes are given in Sections 4 and 5 of the REDD Project Implementation Report (PIR) Annex 1.

Indicator 11 (output): Number of environmental roadshows given*

The focus of this year's environmental education sensitisation roadshows, which were carried out between 1st of March to the 19th of April 2023, was on living in harmony with nature and the importance of sustainable forest management, through agroforestry, sustainable harvesting of forest resources and land use planning. These roadshows highlighted the impacts of unsustainable and damaging practices, including the use of poisons for fishing, felling trees for spice harvesting, and overexploitation of rattan, and emphasised the communities' roles in managing pressures on forest resources. A total of 2,029 people (946 males and 1,083 females) attended the forest edge community roadshows in the 42 FECs that were visited across 6 of the 7 Gola Chiefdoms.

Table 5. Location of Forest Edge Communities roadshows, indicating the number of participants for each Chiefdom.

Name of chiefdom	Location / Sectional Head Quarter Town	Number of people attending roadshow	Number of males	Number of females
Malema	4 FECs	187	94	93
Gaura	4 FECs	111	56	55
Nomo	9 FECs	363	177	186
Tunkia	9 FECs	414	191	223
Barri	5 FECs	381	160	221
Koya	0	0	0	0
Makpele	11 FECs	573	268	305
Total	**42**	**2,029**	**946**	**1,083**

No Sectional roadshows were conducted this year.

Indicator 12 (output): Number of Nature Clubs set up*

During the verification period, no new Nature Clubs were established, but the department continued to support the 39 exiting nature clubs established in 2013. Each year the Community Development Department conducts fieldtrips and trainings in 7 selected schools (1 per Chiefdom) together with Nature Club leaders and Nature Club contact teachers. These trainings include the use of the Nature Club guide, how to organise field trips and roadshows, the protection of the national park and identification of plant and animal species. However, only 2 nature club pupils field trips were organised in 2023, for Joru and Baoma in Gaura and Koya Chiefdoms respectively. The remaining Chiefdoms Malema, Nomo, Tunkia, Makpele and Barri only received support for teaching and learning materials this year.

Table 6. Location of Nature Club schools visited in the seven Gola chiefdoms in 2023.

Name of chiefdom	Location / of Nature Club Schools	Number of male students	Number of female students	Total Number of Nature Pupils attending Field Trip
Gaura	Joru	12	12	24
Barri	-	-	-	-
Makpele	-	-	-	-
Tunkia	-	-	-	-
Nomo	-	-	-	-
Koya	Baoma	14	10	24
Malema	-	-	-	-
Total	**2**	**26**	**22**	**48**

Indicator 13 (output): Number of species-specific awareness raising events carried out

During the verification period 3 species specific awareness raising events were carried out with a special focus on species threatened by the illegal wildlife trade as part of the broader Illegal Wildlife Trade Challenge Fund project implemented by GRC-LG. Further details are provided in Table 7 below.

Table 7. Species specific awareness raising events.

Event	Brief description	Date	Number of participants
World Pangolin Day Radio Discussion	The Superintendent and Technical Advisor of the Research Department had a radio discussion program on local radio to raise awareness about the importance of these animals and the threats they face. The following topics were discussed: • Status of pangolins as protected species • Importance of pangolins in the ecosystem as pest regulators and environmental engineers • Threats including hunting for meat and scales • What can communities do to help?	18th February 2023	-
IWT Roadshow, Nomo Chiefdom	Under the Illegal Wildlife Trade (IWT) project, in June 2023 a roadshow was held with project focal communities in Nomo Chiefdom (Faama and Dambala) to share lessons from the project and reiterate key messages. This included a role play drama centred around the importance of chimpanzees and the damaging impacts of the pet trade.	17th- 20th June 2023	**77**
World Chimpanzee Day Radio Show	The Superintendent for Research was invited to speak on several local radio stations to mark World Chimpanzee Day (14th July) and raise awareness about the importance of chimpanzees. This included messages emphasizing their close relationship with humans and consequences for capturing or killing these animals.	14th July 2023	-

Indicator 14 (output): Number of land use planning initiatives begun in community land*

In January 2023 relevant local authorities and other stakeholders including resource users group members of eleven FECs from across the seven chiefdoms consisting of 196 female and 226 males were engaged on exploring possibility of creating community use zone both in the protected areas and a village level community conservation area. One of the driving forces behind this initiative was the reported lack of availability of Non-Timber Forest Products (NTFPs) in their own community forests due to over exploitation and encroachment by neighbouring communities. It was seen as an opportunity to develop management systems to regenerate these prized forest resources.

In February 2023, a follow up workshop was held under the PAPFor project to identify areas of confusion over the NTFP extraction, use and marketing and find ways on how to deal with the issue. Several villages registered complaint against both neighbouring FECs and chiefdoms outside the Gola Forest project areas. The major conflicts emerged around rattan, which is highly valued by craftsmen and for use in building materials. It was resolved that the illegal entering of strangers into neighbouring community forest for harvesting of rattan should stop and rattan should be harvested sustainably. It was proposed that community members should only extract rattan in their own community forest and boundaries between community forests should be demarcated. If a stranger wants to harvest rattan in neighbouring community forest, he or she should take permission from the community authorities.

In November 2023 a separate meeting was held with members of the Gayayeyie Hill Community Forest Reserve committee and stakeholders from 6 surrounding communities: Joru, Perri, Gombu, Niawama, Njagbema and Njala. The purpose of this meeting was to share the lessons learnt from this initiative and the value of protecting community forest to conserve freshwater resources. This detailed the impacts of deforestation around streams which have caused them to dry up where previously they would flow throughout the year and the impacts of fertilizer, pesticides and other chemicals which pollute streams through runoff from nearby farms. This sharing of lessons among neighbouring communities provides encouragement to others to pursue and promote more sustainable forest governance and management moving forward.

Between November and December 2023, CSSL engaged 5 communities in the Nomo Chiefdom (Waiyehun, Madina, Lowuma, Faama and Gbadalahun) to develop land-use plans and establish community forest bylaws and regulations as part of the ongoing USAID-funded West African Biodiversity and Low Emissions Development (WABiLED) project. Following a series of meetings, CSSL have reviewed existing community bylaws and governance structures and proposed revisions to improve natural resource management, though these have yet to be formally agreed by community stakeholders. Between 8th and 15th November CSSL also conducted a participatory mapping exercise to idenitfy potential restoration sites in each of the 5 communities.

Table 8. Brief description of land use planning activity

Event	Brief description	Communities Involved	Date	Documentation (ring file name & doc. number)
Resource user group meeting	Local authorities and community resource user groups engaged on exploring possibility of creating community use zone both in the protected areas and a village level community conservation area	Makpele Chiefdom (Dombu, Nyeyama), Guara Chiefdom (Njala), Malema Chiefdom (Sagoihun, Makpoima), Barii (Boma), Nomo (Baoma), Tunkia (Jagboima, Golawoma) and Koya (Mapuma, Segbema).	January 2023	-

NTFP Workshop (PAPFor)	Identifying areas of confusion over the NTFP extraction, use and marketing.	Joru, Lalehun, Guworbu, Naiwama, Wayeihun Sembehun, Baguihun, Yorro, Malema Gieya, Bendu, Makpoima, Dukor Wagikor, Misila, Sagoihun, Gbwga, Golawoma, Seiyama and Vaama	February 2023	-
Lessons learnt meeting with Gayayeyie hill community forestry committee members and stakeholders from 6 villages surrounding the Gayayeyie stream (PAPFor)	Engaging Gayayeyie committee members and community stakeholders in 6 villages in Gaura chiefdom on the lesson learned in preserving their community forest as a potential for good water source.	Joru, Perri, Gombu, Niawama, Njagbema and Njala	November 2023	-

** Note: this also features in the CCB indicators (#57 & 60), described in PIR Annex 1.*

Indicator 15 (outcome): Areas of forest with HCV set aside for conservation/low impact use*

Despite progress made in 2021-2022 under the Darwin Project in Malema Chiefdom, and the consultative meetings detailed above, no new areas of forest were set aside for conservation or low impact use in 2023.

** Note: this is related to a CCB indicator (#60), described in PIR Annex 1.*

Indicator 16 (outcome): Knowledge of forest and species values increased

This indicator is monitored through the Activity Survey Module 5: Co-management & LUP (see document *Output, outcome, and impact monitoring for the Gola REDD project*) and through the longitudinal survey Module: Attitudes (see document *Social impact monitoring - longitudinal protocols and survey*).

In 2023, the Environmental Education team staged roadshows in 42 Forest Edge Communities (FECs) across six (6) chiefdoms (Malema, Gaura, Tunkia, Barri, Nomo, and Makpele) and organised an additional roadshow in two communities (Faama and Dambala) in the Nomo Chiefdom under the IWT project. The project also recruited and trained 56 “Species Champions” across 14 communities in Nomo Chiefdom with a focus on species threatened by the illegal wildlife trade. The focus on these key species, which include Western Chimpanzee (critically endangered), Forest Elephant (endangered), three species of Pangolins (all vulnerable or endangered) and the Timneh Parrot (endangered), and sustained messaging across roadshows and radio programmes has improved communities’ awareness of their importance, their status as protected species both within and outside the National Park, and the threats they face.

The meeting of the Gayayeyie Hill Community Forest Reserve committee and stakeholders from surrounding communities highlights the growing appreciation of the value of the forest for providing ecosystem services, particularly in the form of fresh and clean water. This is a message GRC-LG is keen to promote and share lessons with the broader landscape.

Indicator 17 (outcome): Number of communities adopting by-laws that include biodiversity elements

This indicator is monitored through the Activity Survey Module 5: Co-management & LUP (see document *Output, outcome, and impact monitoring for the Gola REDD project*). See Table 8 below.

Between November and December 2023 eight communities across the Gaura and Koya Chiefdoms adopted new bylaws which included biodiversity or natural resource management elements. The purpose of the bylaws is to give the village community forestry committees and local authorities' powers to exercise full management and to be held accountable for the protection of the forest and sustainable management of the natural resources. The newly adopted bylaws and penalties of those who break them is reported in the table below.

Table 8. By-laws adopted by communities

Location	Brief description of by-law	Date	Documentation
Perri, Njagbema, Joru, Njala (Gaura Chiefdom) **Ngieya, Mapuma, Gobuoma, Segbwema (Koya Chiefdom)**	**By-laws common to all 8 communities** **<u>Natural Resource Management</u>** 1. No one is allowed to clear land for farming and mining close to or inside community reserved forest Penalty: A fine of Le500 2. No one is allowed to hunt in the community reserved forest. Penalties: Confiscate hunting materials from defaulter and pay a fine of Le250 3. Logging without permission is a crime and carries a fine of Le500 for the operator and Le250 for any leader/committee member involved. 4. Adding poison to any part of the streams/river around the villages is prohibited. Penalty: Fines of Le100 per person. 5. Charcoal burning can only be done by taking permission from the owner of the bush. Penalty: Defaulter must pay a fine Le100 **<u>Social Behaviours</u>** 11. No one is to be seen with a gun illegally anywhere, be it in the forest or in the community. Penalty: Defaulter must pay a fine of Le1000 to the town chief and is reported to the nearest police station	**Nov-Dec 2023**	-
Perri (Gaura Chiefdom)	2. Unauthorized activities in the community conservation areas are completely prohibited. Example, farming, logging, harvest of non–timber forest product. Penalty: Confiscate item, followed with payment of Le200	**Nov-Dec 2023**	-
Ngieya (Koya Chiefdom)	1. No one is allowed to harvest rattan without taken permission from the town chief. Penalty: Failure followed with a fine of Le200 2. Washing of clothes at the drinking water source is completely prohibited. Penalty: 20 Le	**Nov-Dec 2023**	-

Research & Monitoring Department

Research & Monitoring Strategy

The biodiversity goals of the project are focused around maintaining and, where possible, improving forest cover and condition throughout the project zone in order to maintain or increase habitat availability and connectivity for high conservation value forest-dependent species. As described in the project document, the project zone meets 3 of the criteria for high biodiversity conservation value at the species, ecosystem, and landscape scales.

The biodiversity monitoring plan therefore has been devised to monitor the progress of the project in maintaining and improving the conservation value of the project zone at the species, ecosystem and landscape scale and project activities are designed to create positive biodiversity impacts against the counterfactual scenario i.e. were no project activities implemented. The overall impacts are measured at two levels: the species level and the ecosystem/landscape level.

Research & Monitoring Impact Indicators

The rationale for the indicators described in this section is set out in section 3.C. of *Hillers & Tatum-Hume – Biodiversity Monitoring Plan for the Gola REDD Project.* They are directly related to the overall biodiversity monitoring plan of the Research & Monitoring Department. During the period from 1st January 2023 to 31st December 2023, the core team of the GRC-LG Research & Monitoring Department consisted of one Superintendent, two Senior Research Technicians, One Senior Research Technician Data and Training and four Research Technicians. The team has been supported by international Technical Advisors for Research & Monitoring.

Impact indicators are considered on ecosystem, landscape and species level, particular focused on High Conservation Value (HCV) components. Section 3.C. of *Hillers & Tatum-Hume – Biodiversity Monitoring Plan for the Gola REDD Project* lists species indicators (HCV 1) and indicators linked to nationally/regionally significant areas (HCV 2) and rare or threatened ecosystems (HCV 3). As the impact indicators are mainly (but not exclusively) focused on the abundance, diversity, and distribution of different species or taxonomic groups reflecting the overall health of the forest, instead of reporting on each HCV indicator separately, progress on different impact indicator groups is here reported under the respective methodology that is used to monitor impacts.

Combined indicator groups are numbered from 18 to 26, to avoid confusion with the outcome and output indicators monitored by the Park Operations and Community Development Departments (output and outcome indicators numbered 1-17). One HCV indicator, number of cartridges and snares found in project area (listed under HCV 1 as 'species threat encounters'), is monitored by the Park Operations Department and is shown in Table 3 of this Annex.

Table 10. Overview on HCV and species indicators that were combined for the progress report following monitoring methodologies.

Combined Indicator Number	HCV indicator	Species indicator	Methodology
18	HCV 3: Change in forest cover and connectivity between forest blocks of the project area	N/A	Remote sensing
19	HCV 3: Change in above ground biomass	N/A	Measurement of carbon stock enhancement & Limited Degradation Survey
20	HCV 1, HCV 2: Abundance and diversity of species encountered Abundance and distribution of species encountered	All terrestrial bird and mammal species, in particular HCV species including Western Chimpanzee, Sooty Mangabey, Jentink's Duiker, Zebra Duiker, Pygmy Hippopotamus, Forest Elephant, White-breasted Guineafowl	Camera trapping
21	HCV 1, HCV 2: Abundance and diversity of species encountered Abundance and distribution of species encountered	Western Red Colobus, Western Pied Colobus, Diana Monkey, Sooty Mangabey	Primate survey
22	HCV 1: Abundance and diversity/distribution of species encountered	Western Chimpanzee	Chimpanzee survey
23	HCV 1: Abundance and diversity/distribution of species encountered	Pygmy Hippopotamus	Pygmy hippo survey
24	HCV1, HCV2: Abundance and diversity of species encountered Abundance and distribution of species encountered	Forest dependent birds (e.g., Gola Malimbe)	Bird point counts
25	HCV1: Abundance and diversity/distribution of species encountered	White-necked Picathartes	Picathartes colony monitoring
26	HCV 1: Abundance and diversity/ distribution of species encountered	Tai Toad and other species	Amphibian survey

Indicator 18 (impact): Change in forest cover and connectivity between forest blocks of the project area under HCV3 (threatened or rare ecosystems).

To monitor changes in forest cover, the Gola REDD project primarily analyses satellite images of the project area and leakage belt for landcover changes (Forest, Non-Forest), following SOPs developed for the baseline map. These SOPs were developed by RSPB to monitor forest cover changes through remote sensing. The updated forest cover and connectivity analysis for 2018/2019 were completed at RSPB HQ in Sandy, UK, and have been collated to the verification and monitoring reports. In 2021/2022, no remote sensing was conducted. As outlined in the Biodiversity Monitoring Plan for the Gola REDD Project (Hillers & Tatum-Hume, 2015), the remote sensing activity will be conducted every 5 years, with the next in 2024. For previous work in GRNP, see Mitchard 2012.

Indicator 19 (impact): Changes in above ground biomass under HCV3 (threatened or rare ecosystems).

Expected output of this methodology is the collection of data on the above ground biomass stored in the Southern block of the project area. As outlined in the Standard Operating Procedures, the same subset of 49 plots that provided the baseline carbon stock data for Gola South in 2015 were re-measured in 2018 following the same SOPs as for the baseline to capture relevant increase in carbon stock held by the forest in Gola South. These plots were selected based on results from the revisit and re-measurement of 61 randomly chosen carbon plots in 2012 out of 609 tree plots that had been measured in 2006/2007 (details in Tatum-Hume *et al*. 2013). An updated carbon stock enhancement measurement, accounting for growth between 2013 and 2018, has been completed at RSPB HQ in Sandy, UK. Refresher training on the carbon stock survey methodology was initially scheduled for October 2023 with plot surveys to commence immediately afterwards. However, this was delayed following the suspension of staff in the Research and Monitoring department as part of an internal investigation into malpractice and is now planned to commence in early 2024.

In 2019 an additional survey method was trialled to assess levels of tree harvesting within the project area by conducting a Limited Degradation Survey of the forest edge along the boundary of the national park. The methodology for this survey was based on the Methods for Monitoring of GHG Emissions and Removals (Winrock, 2013). This survey was repeated again in 2021 and the results are presented in the report for 2021/2022. The aim is to repeat this survey every 2 years with the next survey planned for 2024.

Indicator 20 (impact): Abundance, diversity and distribution of species encountered under HCV 1 (globally, regionally, or nationally significant concentration of biodiversity values - threatened and endemic species) and HCV 2 (globally, regionally, nationally significant large landscape level areas where viable populations of natural populations occur in natural distribution and abundance) for indicator species (all terrestrial bird and mammal species, in particular HCV species including Western Chimpanzee, Sooty Mangabey, Jentink's Duiker, Zebra Duiker, Pygmy Hippopotamus, Forest Elephant, and White-breasted Guineafowl).

It has been largely demonstrated over the last decades that camera-trapping is an appropriate method for mammal inventory in all environmental conditions, allowing a rapid assessment of wildlife conservation status (Silveira et al. 2003). The method is also efficient for inventories of cryptic animals, as well as for population studies of species for which individuals can be individually recognised by marks (Karanth, 1995; Carbone et al., 2001).

In the Gola context, camera traps have proven to be an invaluable tool for the monitoring of HCV species such as Western Chimpanzee, Sooty Mangabey, different duiker species (e.g., Jentink's and Zebra duikers), Pygmy Hippopotamus, African Forest Elephant, and White breasted guineafowl. The last camera trap study under the Gola REDD project was completed in 2018/2019 (for details see Annex 3 of *Hillers & Tatum-Hume - Biodiversity Monitoring Plan for the Gola REDD Project; 'Standard Operating Procedures for Camera Trapping'*) and formed the updated camera trap baseline. All the images have been classified, analyzed, and stored in the database at the RSPB HQ, and the results are included in the 2019 REDD Project Implementation Report.

The second round of REDD camera trap surveys began in April 2021 with 67 of the target plots surveyed by mid-2022. However, due to a combination of technical faults and human error, only 32 camera traps were successful in returning images. With additional demands placed on camera traps as a result of planned surveys under the Illegal Wildlife Trade

(IWT) Challenge Fund project over this period, this activity was halted with the aim of restarting the survey in late 2023.

In February 2023, the Research Team completed the second deployment of camera traps (29) for the IWT project. These cameras were deployed in community forests in Nomo chiefdom along the Morro River boundary to try and establish areas of high conservation value as well as important areas of activity and potential migration routes for threatened species between Sierra Leone and Liberia. The maps below highlight captures of chimpanzees, elephants and pangolins over the course of the IWT and Darwin Initiatve Projects. The images from these cameras, together with those from previous deployments under REDD surveys, have now been uploaded to the platform Wildlife Insights. The Research and Monitoring Department received training on the processing and identification of images using this platform and, with the support of the RSPB Conservation Science team, all images have now been processed and are ready for analysis.

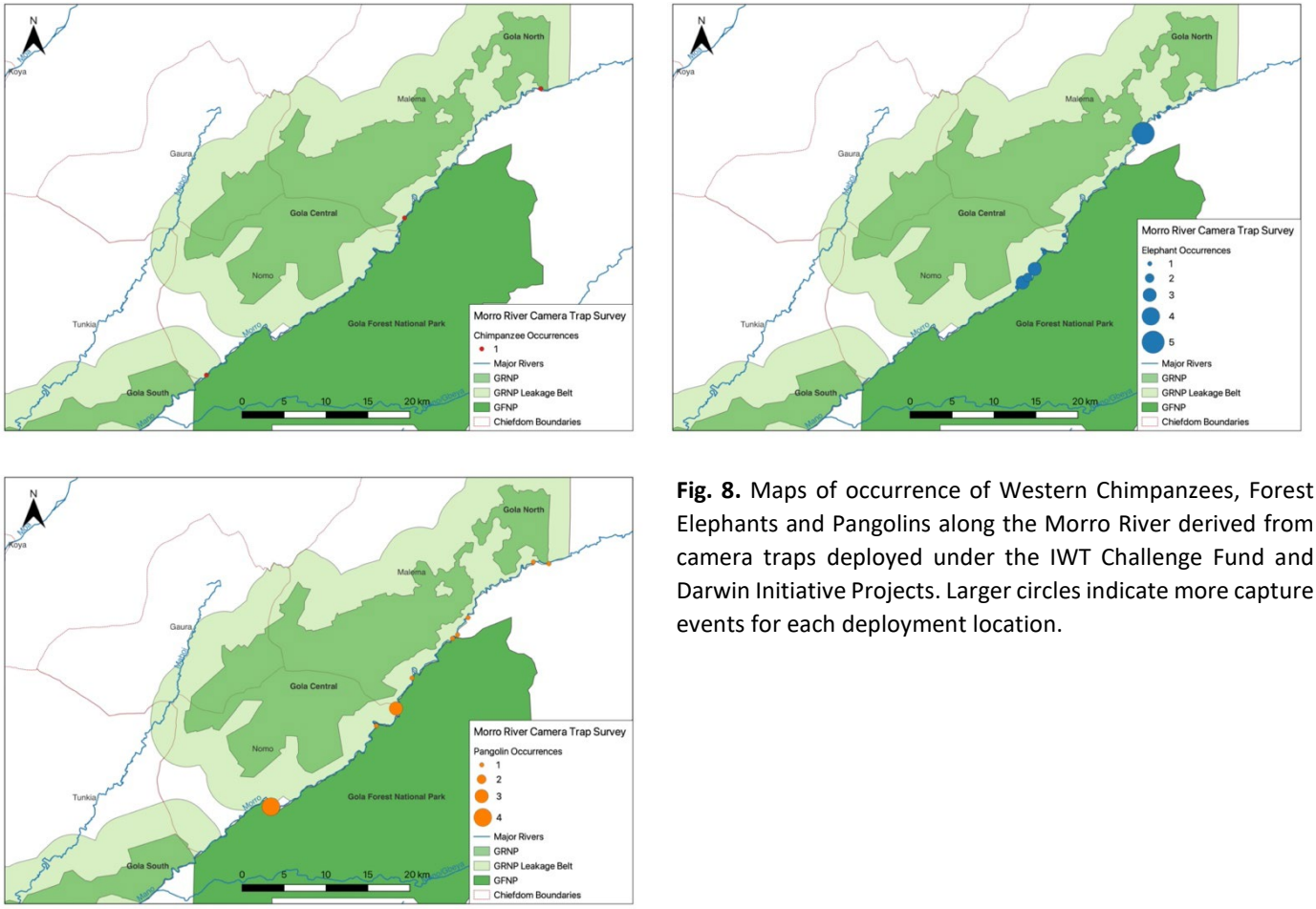

Fig. 8. Maps of occurrence of Western Chimpanzees, Forest Elephants and Pangolins along the Morro River derived from camera traps deployed under the IWT Challenge Fund and Darwin Initiative Projects. Larger circles indicate more capture events for each deployment location.

Following the procurement of additional cameras, a deployment of 9 cameras was carried out in December 2023 targeting plots in Gola South. These cameras will be collected in January 2024 with subsequent deployments to follow in the remainder of the dry season in 2024 when additional cameras will also be added to the department's stock.

Indicator 21 (impact): Abundance, diversity and distribution of species encountered under HCV 1 (Globally, regionally or nationally significant concentration of biodiversity values – threatened and endemic species) and HCV 2 (Globally, regionally, nationally significant large landscape level areas where viable populations of natural populations occur in natural distribution and abundance), for indicator species (Western Red Colobus, Western Pied Colobus, Diana Monkey, and Sooty Mangabey).

The first primate survey under the Gola REDD project was completed in 2016/2017 (for details see Annex 4 of *Hillers & Tatum-Hume - Biodiversity Monitoring Plan for the Gola REDD Project; 'Standard Operating Procedures for primate Survey'*) and its results are included in the 2017 REDD Project Implementation Report. The primate survey involves a total of 10 permanent line transects (5 in Gola South and 5 in Gola Central) each roughly 4km long (see Figure 10). These transects were selected based on their locations within the national park and baseline data which recorded sightings of all primate species along these transects. Each transect is to be surveyed a total of 6 times during the monitoring period for a total of 60 transects (227km in total due to some transects being shorter than 4km).

The subsequent primate survey was due to start in 2021 but was delayed due to the prioritization of the recovery of other project activities postponed as a result of the COVID pandemic. Primate monitoring activities were initiated in early 2022 but only 5 transects were completed before the wet season. This survey was restarted in November/December 2022 following a refresher training for staff in the department organized by the Research Technical Advisors and the Superintendent at the Lalehun Research Centre. A total of 7 transects were completed by the end of the year with the remaining transects planned for January-May 2023. However, the surveys were again disrupted at the end of March 2023 and had to be put on hold. In total the 5 transects in Gola Central were surveyed 4 times while the 5 transects in Gola South were only surveyed 2 times. This leaves 2 repeat visits to Gola Central and 4 repeats of Gola South transects to be completed in 2024.

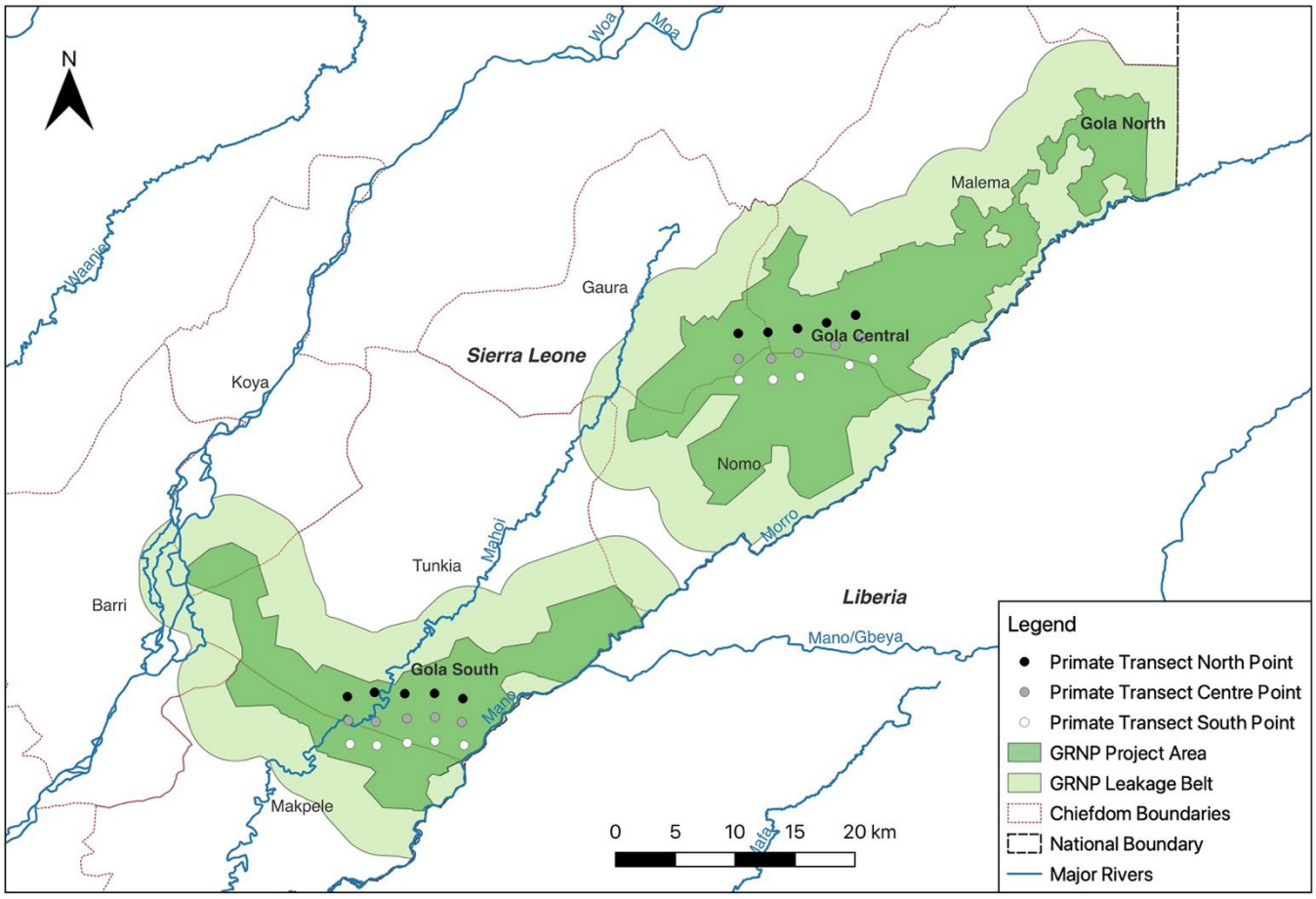

Fig. 9. Primate survey transect layout for the project area (GRNP) indicating start (white dots), centre (grey dots) and end points (black dots) of 10 line transects (from South to North) in the Gola Central and Gola South blocks

Indicator 22 (impact): Abundance, diversity and distribution of species encountered under HCV 1 (globally, regionally or nationally significant concentration of biodiversity values – threatened and endemic species) for indicator species (Western Chimpanzee).

The overall aim of the chimpanzee surveys is to quantify the distribution and abundance of the Endangered Western Chimpanzee (*Pan troglodytes verus*) in the project zone (GRNP and leakage belt). This enables analyses of chimpanzee population trends over time, estimating densities and identifying impacts of human disturbance.

The data are collected by conducting nest counts and recording other chimpanzee signs using DISTANCE sampling along 94 transects throughout the 3 blocks of the Gola Rainforest National Park and parts of the leakage belt. Transects are normally each 2 km long (though some are shorter due to their location). The distance of all transects together covers 170 km. The chimpanzee survey will be performed every 5 years throughout the 30-year lifetime of the project.

The first chimpanzee survey was conducted in the Gola Forest in 2008 and 2009 (for details see Annex 5 of *Hillers & Tatum-Hume - Biodiversity Monitoring Plan for the Gola REDD Project; 'Standard Operating Procedures for Chimpanzee Survey'*). The estimated population resulting from the 2008/2009 survey was 305 individuals of chimpanzees and a density of 0.27 individuals/km2 (Ganas 2009). The distribution of chimpanzees in the GRNP area was not even and major human disturbance resulted from hunting. The 2016 survey estimated a population of 294 (159-543) chimpanzees in the national park and Leakage Belt with a density of 0.27 per km^2 across the study area indicating a relatively stable population. The most recent chimpanzee survey started in 2020/2021 and was finally completed in 2022.

Due to errors in data collection, only 77 transects could be included in the analyses with a combined distance of 128.8km. 25 nest groups were identified across these transects (see Fig 9 below) with a total of 52 individual nests sighted (an average group size of 2.08). As a result of the low detection rate during this survey, the level of uncertainty involved in the calculation of chimpanzee density using DISTANCE software makes population estimates unreliable. However, the distribution of chimpanzee nests is comparable to previous surveys, with the high concentration of nests within the park boundaries confirming the importance of the protected area for the Gola chimpanzee population.

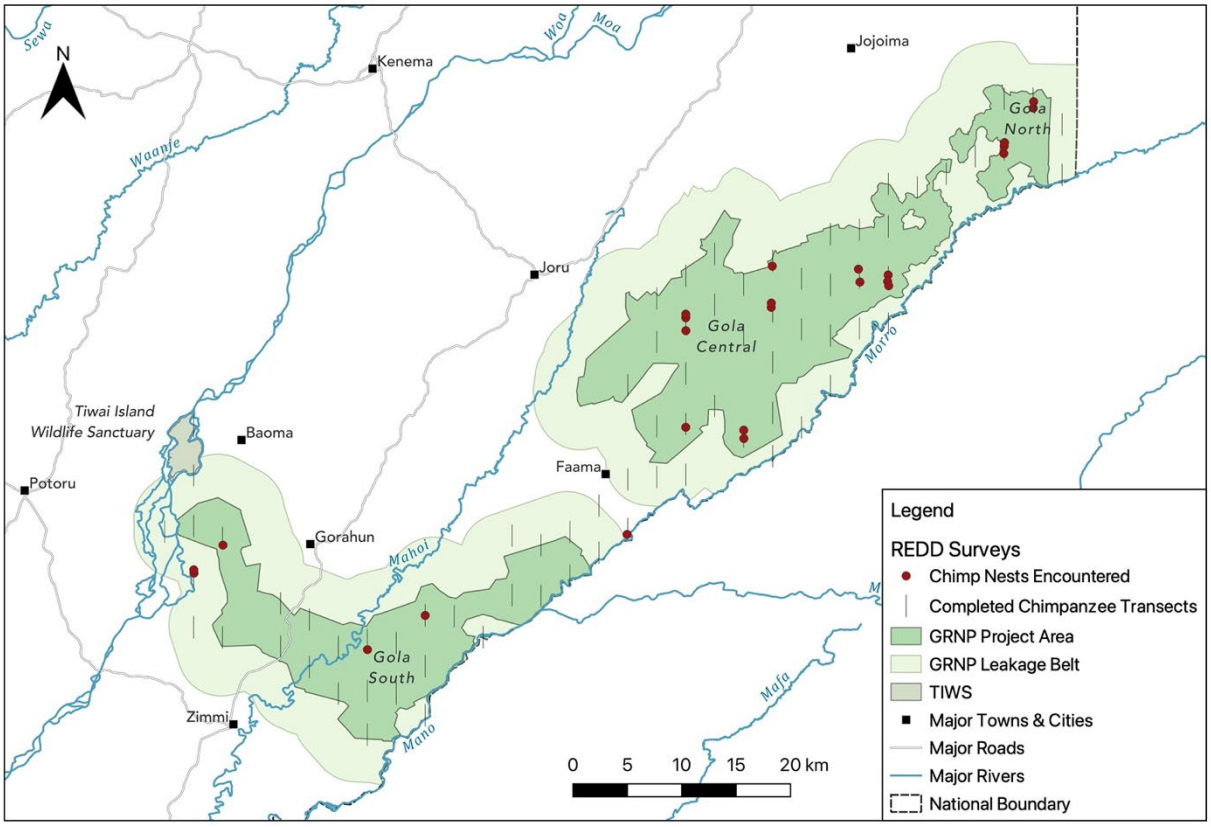

Fig. 10. Location of the chimpanzee nests encountered during this survey between 2021 and 2022.

Indicator 23 (impact): Abundance, diversity and distribution of species encountered under HCV 1 (globally, regionally or nationally significant concentration of biodiversity values – threatened and endemic species) for indicator species (Pygmy Hippopotamus).

The Pygmy Hippopotamus (*Choeropsis liberiensis*) is an Endangered species found only in four countries of the Upper Guinea region of West Africa. Faced with threats from logging, farming, hunting, and clearing for settlements, the population in Sierra Leone has been estimated in 2010 to be roughly 150 individuals in the Gola Forest and the Moa River islands (including Tiwai). Even though a recent report of pygmy hippos in unprotected areas gives some hope that there may be other small populations elsewhere in the country, the GRNP has been identified as the last main refuge for the species in Sierra Leone (Mallon et al. 2011).

On the REDD Annual Operating Plan, pygmy hippo surveys are to be conducted every five years (for details see Annex 6 of *Hillers & Tatum-Hume – Biodiversity Monitoring Plan for the Gola REDD Project; 'Standard Operating Procedures for Pygmy Hippo Survey*). The most recent pygmy hippo monitoring activity was completed in 2020/2021 and the results presented in the 2021 report. As such no pygmy hippo survey activities were conducted in the 2022 monitoring period. The next pygmy hippo survey is planned for 2024/2025.

In the interim GRC-LG will be piloting the use of eDNA analyses of water samples as a novel survey technique for capturing pygmy hippo abundance and distribution after funding was secured from the Basel Zoo in November 2023.

Indicator 24 (impact): Abundance, diversity and distribution of species encountered under HCV 1 (globally, regionally or nationally significant concentration of biodiversity values - threatened and endemic species) for forest dependent birds.

The overall aim of these surveys is to get regular, reliable knowledge on the composition and habitat distribution of diurnal bird communities in GRNP and the leakage belt. Many species, both common and rare, are sensitive to habitat degradation and as habitats change the proportion of forest to generalist species will change thus providing a good indicator for the biodiversity impacts of the Gola REDD project. Point count surveys are the best method to get reliable information on a potential change in distribution of these species, considering the terrain, particularly outside of the GRNP where habitat patches might be small and where pre-cut transects are not available for access as they are inside the national park.

The data is collected by conducting point counts at 200m intervals along transects inside GRNP, with a focus on the Gola Central block, and in habitat patches in the leakage belt. The aim is to perform point counts every 5 years throughout the 30 years lifetime of the project. The first point counts inside and outside the national park were undertaken between November 2013 and November 2016, following on from surveys conducted between 2005 and 2007 inside GRNP only. The 2013 to 2016 survey provides a baseline dataset for comparison purposes for this monitoring activity and is stored in a central database (for details see Annex 7 of *Hillers & Tatum-Hume - Biodiversity Monitoring Plan for the Gola REDD Project; 'Standard Operating Procedures for Bird Point Counts*).

The following bird point count survey started in the 2019/2020, but the research team were only able to complete 49 bird point counts out of the target 200. The delay was due to the lack of bird identification expertise within the Research & Monitoring department and the concomitant inability to bring in experts from abroad due to the travel restrictions imposed by the COVID pandemic.

In 2023 a consultant from RSPB was engaged to support the Research and Monitoring department to complete the REDD bird point counts and continue to build the capacity of the research team to conduct these surveys independently. The team completed 198 point counts between January and March 2023 (see Fig. 12). Due to the adjustment of the T44 transect line in the Gola Central block this led to 2 fewer points recorded along these transects. The consultant led the surveys for the first 61 point counts in the Gola Central block, the subsequent 113 point counts were recorded jointly by both the consultant and the Senior Research Technician, before data collection was handed over completely to the local research team for the final 24 point counts. Points in community forests outside the leakage belt also differed slightly from target locations (see Fig. 12), with some points shifted due to deforestation as per the Standard Operation Procedure.

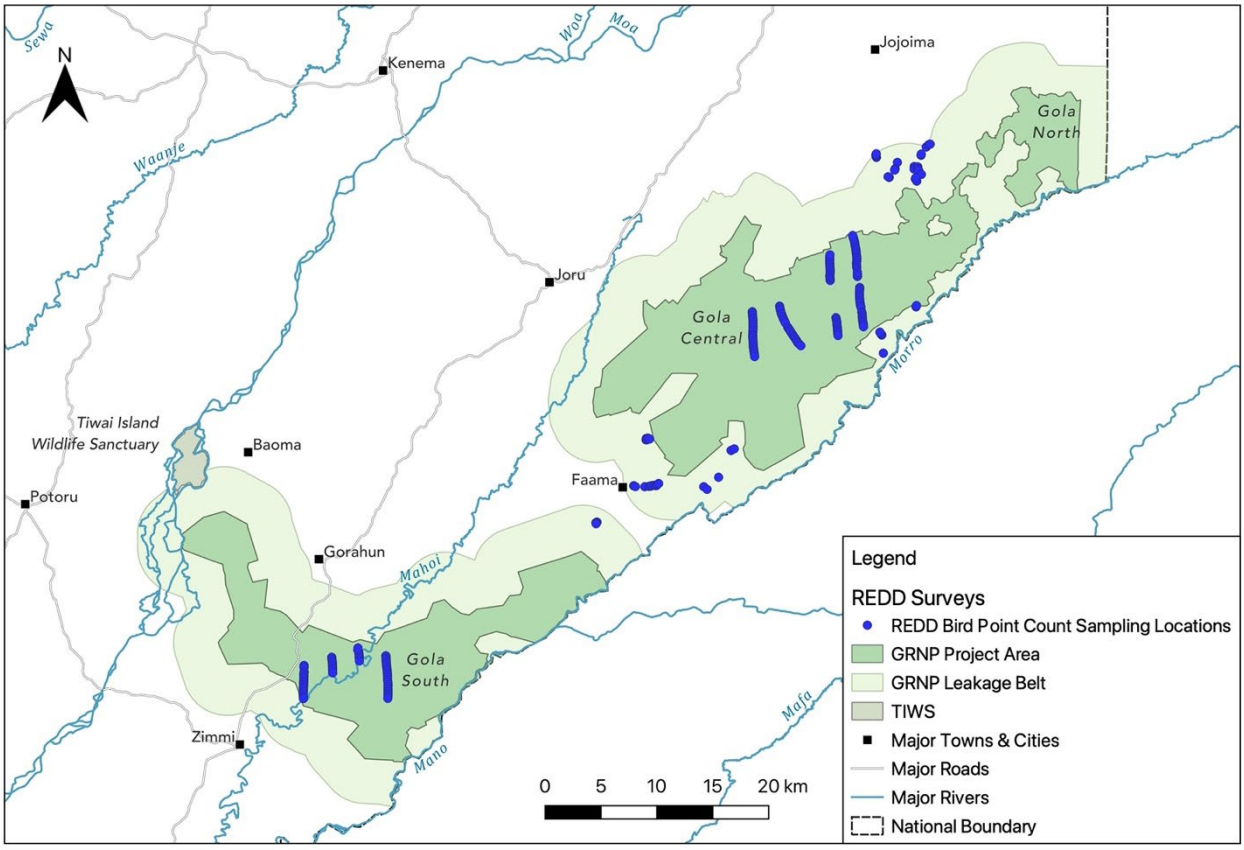

Fig. 11. Locations of 200 bird point count sampling points from REDD SOPs.

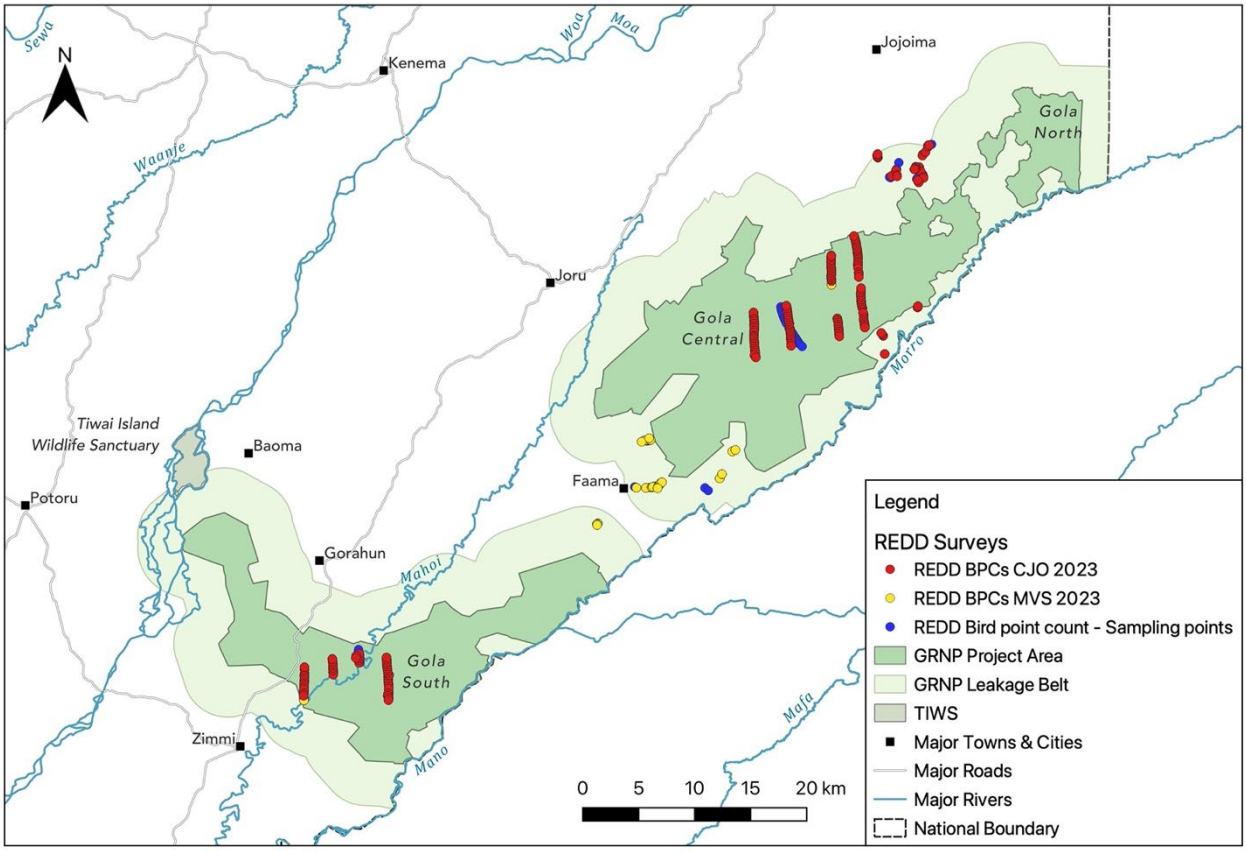

Fig. 12. Locations of 198 bird point counts conducted between January and April 2023. Red dots indicate points led by RSPB consultant, yellow dots denote those led by GRC-LG research technicians, blue dots denote target original sampling points based on REDD SOP.

During the survey, the research team identified 154 distinct bird species (including 6 Red Listed Species), with a further 20 bird calls recorded though not identified to species level. While more detailed analyses have yet to be conducted, initial results indicate community forests in the leakage belt, outside of the national park, also host a significant number of forest-dependent species contributing to the space and habitat available for these birds (see Fig. 13 below).

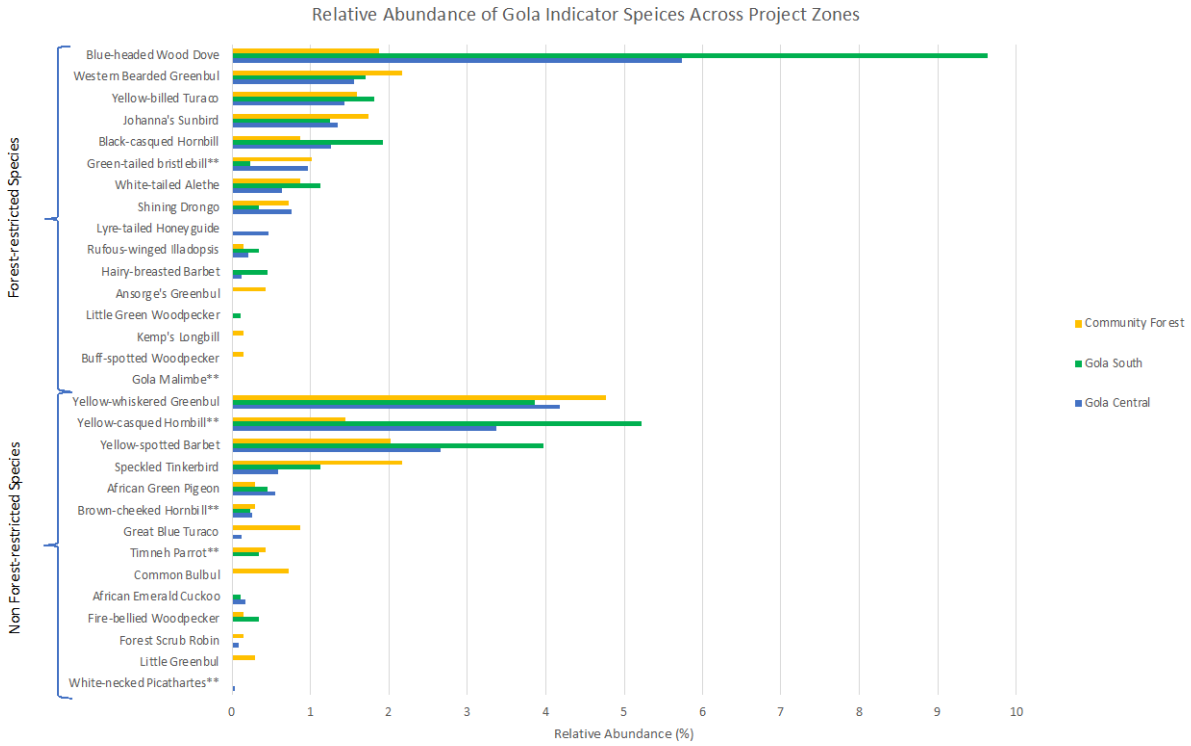

Fig. 13. Summary chart showing relative abundance of sub-set of bird species recorded across the three broad areas: Gola South, Gola Central, and Community Forests. ** Denotes species classified as Near Threatened, Vulnerable, or Endangered on the IUCN Red List.

Indicator 25 (impact): Abundance, diversity and distribution of species encountered under HCV 1 (globally, regionally or nationally significant concentration of biodiversity values - threatened and endemic species) for indicator species (White-necked Picathartes)

In 2023, no Picathartes monitoring activity was implemented. The last Picathartes survey was conducted in 2018/2019 and, as outlined in the Standard Operating Procedures (for details see Annex 8 of *Hillers & Tatum-Hume – Biodiversity Monitoring Plan for the Gola REDD Project; 'Standard Operating Procedures for Picathartes Monitoring*), and the next will be conducted in 2024/2025.

Indicator 26 (impact): Abundance, diversity and distribution of species encountered under HCV 1 (globally, regionally or nationally significant concentration of biodiversity values – threatened and endemic species) for indicator species (Tai Toad and other amphibian species).

The last amphibian survey was conducted in 2018/2019 and, as outlined in the Standard Operating Procedures (for details see Annex 9 of *Hillers & Tatum-Hume – Biodiversity Monitoring Plan for the Gola REDD Project; 'Standard Operating Procedures for Amphibian Monitoring*), the next survey was initially scheduled for 2023. However, due to the backlog of incomplete surveys this has been postponed to 2024.

Activities of the R&M department not linked to specific impact indicators

In addition to the implementation of the core activities for the Gola REDD project, as outlined in *Hillers & Tatum Hume – Biodiversity Monitoring Plan for the Gola REDD Project*, the Research & Monitoring Department is involved in a variety of other activities, such as opportunistic surveys, training, community sensitization and environmental education, eco-tourism, hosting and supervising intern students, hosting external researchers, giving support to other project components, and data management and analysis. The following sections give a brief overview on these activities.

Observations of HCV species in 2023

In total, 12 HCV species were recorded in the project area in 2023 (see Table 11). For the first time these observations have all been captured by rangers using the SMART Mobile App to record wildlife observations in the field. Ranger patrols might not have been distributed evenly throughout the entire project area so the data can only serve as additional information showing the presence of HCV species within the project zone and may not necessarily be used as a baseline for comparisons year to year or with other datasets. For some of the species, distribution maps of recorded observations produced in SMART are shown below (Figures 13 to 15).

Table 11. List of HCV species recorded through ranger patrols in 2023.

Species	IUCN Status	Direct Observations	Indirect Observations	Total
Campbell's Monkey	NT	2	-	2
Diana Monkey	EN	84	82	166
Forest Elephant	VU	-	7	7
African Golden Cat	VU	-	-	0
Jentink's Duiker	EN	2	-	2
Leopard	VU	-	-	0
Lesser Spot-nosed Monkey	NT	1	-	1
Olive Colobus	VU	3	1	4
Pygmy Hippo	EN	-	1	1
Sooty Mangabey	VU	55	67	122
Western Pied Colobus	EN	67	20	87
Western Chimpanzee	CR	7	38	45
Western Red Colobus	EN	125	23	158
Zebra Duiker	VU	-	-	0
Timneh Parrot	EN	-	-	0
White-breasted Guineafowl	VU	15		15
White-necked Picathartes	VU	-	1	1

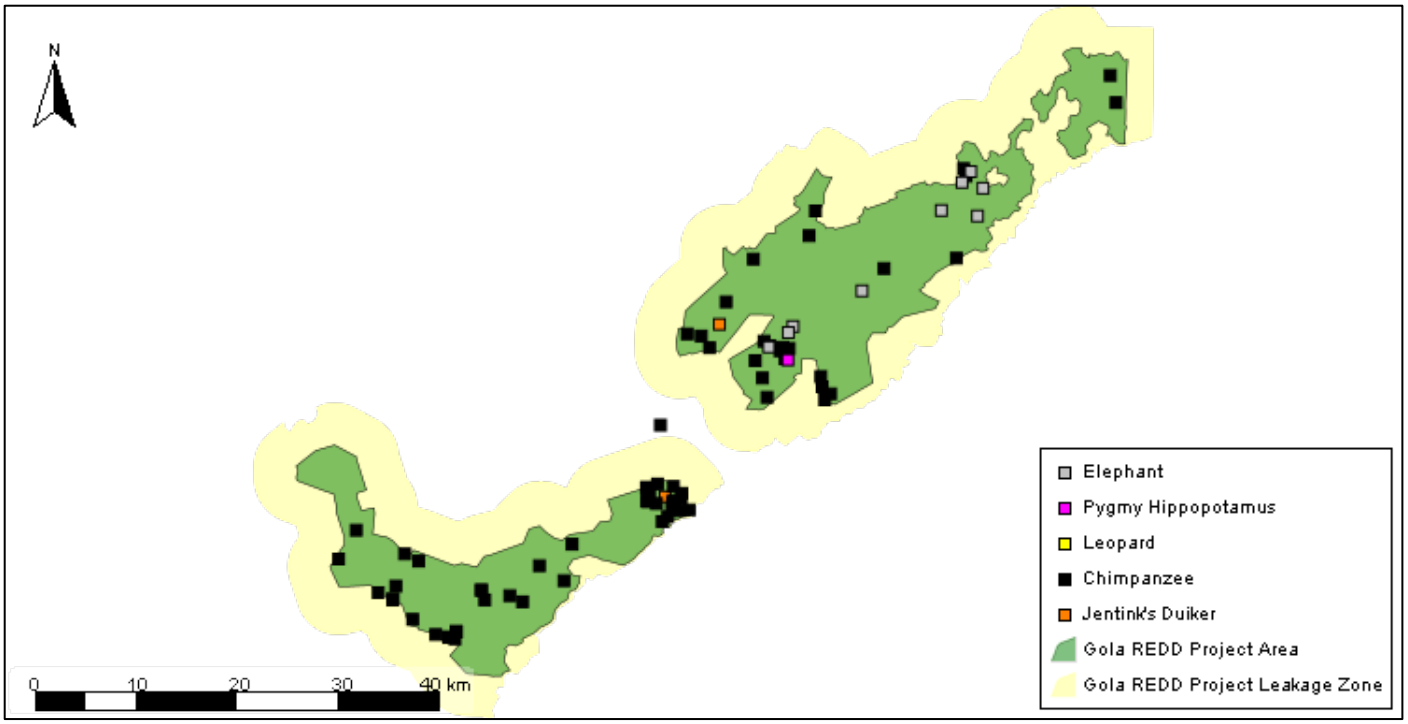

Fig. 13. SMART map of large mammal species recorded through ranger patrols in 2023.

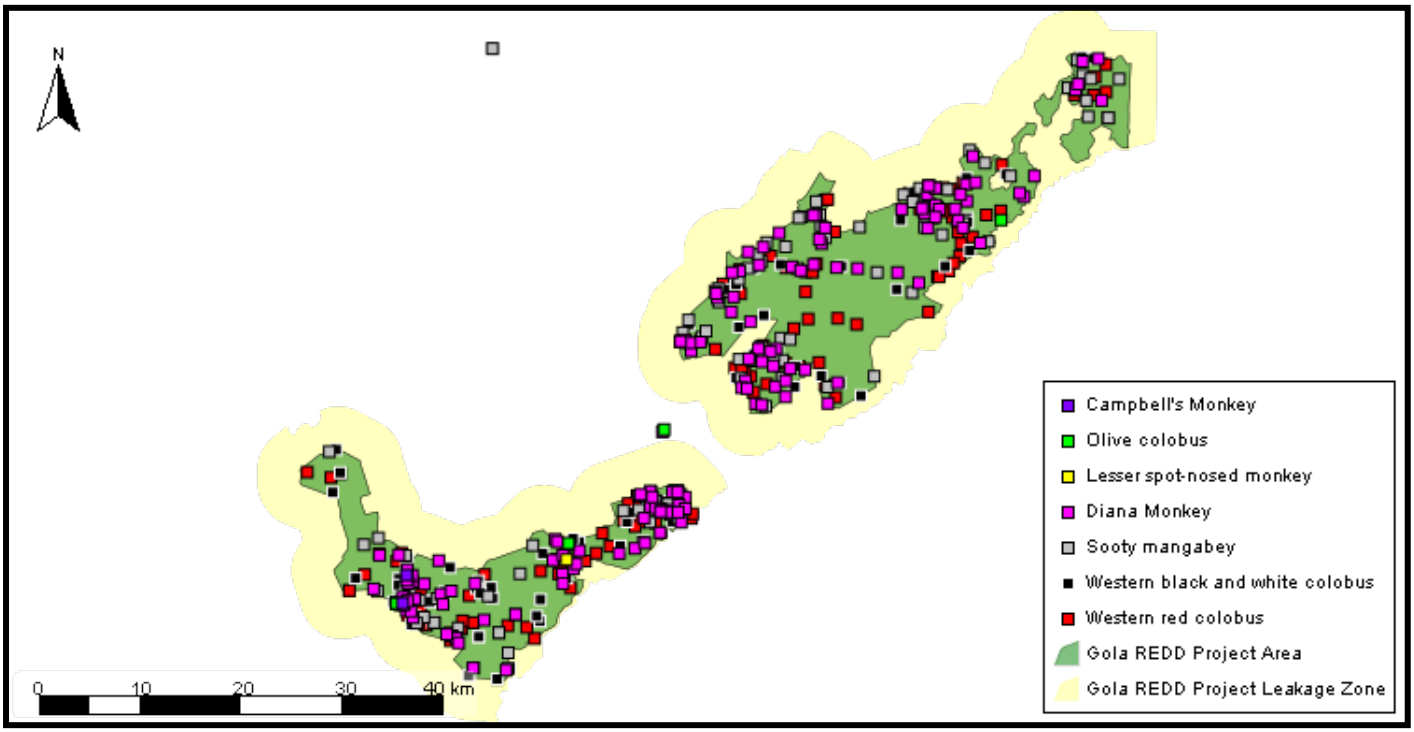

Fig. 14. SMART map of monkey species recorded through ranger patrols in 2023.

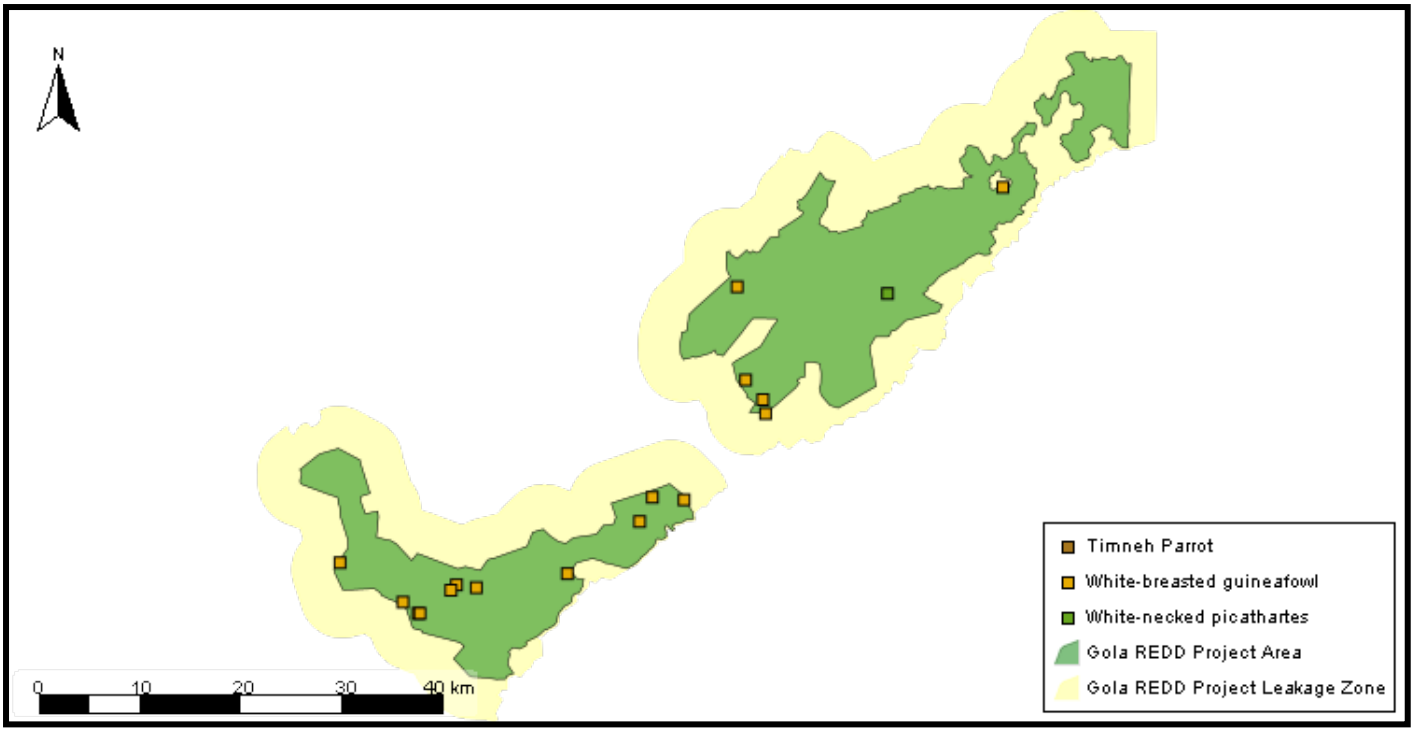

Fig. 15. SMART map of bird species recorded through ranger patrols in 2023.

Training & Capacity Building

GRC-LG endeavors to provide regular training facilities and encourages staff members to search for further, external training opportunities. Table 12 gives an overview of external training sessions and courses attended by the members of the Research & Monitoring Department in 2023. In addition, at the onset of each new field activity, the research team is given training in the office followed by training and supervision in the field, in order to ensure that activities are implemented as outlined in the various Standard Operating Procedures for the Gola REDD Biodiversity Monitoring program. This training is led by the Technical Advisor(s) for Research & Monitoring with support from the Superintendent and the Senior Research Technicians.

Table 12. Overview of training sessions attended by the members of the R&M department in 2023

Training or course title	Date	No. of participants
Internal training on basic report writing	21/02/23	1
Introduction to Wildlife Insights platform for camera trapping	07/03/23	12
Using SMART Mobile for patrol and biomonitoring data collection	10/04/23 to 14/04/23	8
Practical training on use of Wildlife Insights platform to process camera trap images	08/05/23 to 09/05/23	12
Internal training on data processing and cleaning	09/08/23	12
Plant identification training for Conservation Enterprise and Research teams	19/09/23	16

Workshop on Chimpanzee Camera Trapping: Survey Design and Data Anlaysis in Abidjan Cote D'Ivoire	16/10/23 to 21/10/23	2

Community sensitization and environmental education

The Research & Monitoring Department gives regular support to the Community Development Department in their implementation of Environment Education Programs at Chiefdom, Section, and Village level. Two Research Technicians are always attached to the team involved with community sensitization and roadshows.

Ecotourism

Depending on the workload, one Research Technician is on standby for tourism activities. The Research Technicians are very familiar with the forest and the local communities and therefore are well placed to accompany tourists to the forest and to communities and are able to explain the forest environment and wildlife to them. For example, the vulnerable White-necked Picathartes and the endangered Gola Malimbe are two HCV species attracting tourists and the assistance provided by Research Technician is particularly useful to identify the best opportunities to sight these birds. The Research Technicians can also lend their expertise in identifying signs and tracking different mammal species in the forest.

Student internships and supervision/support for BSc and MSc theses

GRC-LG has an MoU with some tertiary education institutions and provides supervision and support for their internship with the programme. These agreements were renewed by the two parties by signing the MoU to strengthen our relationship with the Tertiary institutions. Students from Njala University and Eastern Technical University, enrolled in biodiversity related courses, are frequently hosted by the R&M department to gain practical field experience and conduct research for their theses. Interns are also given the opportunity to shadow staff in the department who are well trained and experienced in the field of biodiversity and conservation. A list of the students that have been accommodated in GRC-LG is shown in Table 13.

Table 13. List of students accommodated in the R&M Department in 2023

N	Name of the student	Degree	University	Length of Placement
1	Issa Brima	Bachelor of Science degree in Biological Schiences	Eastern Technical University	3 months
2	Swaray S. Vandi	Bachelor of Science degree in Biological Sciences	Njala University Sierra Leone	3 months

In addition to the interns listed above, the department hosted three (3) volunteers to help carry out research activities.

1. Bockarie Amara
2. Yankuber Caulker
3. Edward Kamara

These volunteers boosted staff capacity in the department serving as auxiliary team members on both REDD activities and sub-projects. Given the training and experience these volunteers receive during their time with the department, they are often among the top candidates for any new projects when opportunities arise to recruit new staff. Most of the volunteers were former interns or students from various universities hosted in the department, elsewhere in the organization, or from the Gola communities.

Hosting external researchers and support to other GRC-LG project components

The Research & Monitoring Department seeks to promote GRNP and the Greater Gola Landscape as a centre for international research on subjects related to biodiversity and conservation. As a result, the department supports a number of external researchers each year to conduct their research in the national park. The research technicians have detailed knowledge of the forest and its biodiversity and can therefore provide invaluable support to visiting researchers. In return, researchers are encouraged to train the technicians in novel methods and technologies and share their results with GRC-LG contributing to the overall capacity of the department. For this reporting period no external researchers applied to work with GRC-LG.

Data Management

The Gola REDD Biodiversity Monitoring database is stored in the office of the Research & Monitoring Department, with a backup on an external hard drive, as well as on the computer of the Technical Advisor(s) for Research & Monitoring and at the Conservation Data Management Unit of the RSPB.

Original field data sheets are photographed/scanned and stored in the Gola REDD Biodiversity Monitoring data base, and hard copies are kept in the office of the Research & Monitoring Department. Whenever the occasion arises, original data sheets are sent to the RSPB headquarters in the UK for safe storage. Exchange of digital data (data scans, digitalised field data, camera trap pictures) between the GRC-LG team and the RSPB headquarters happens frequently, using established internet data exchange platforms (such as Google Drive) or when an RSPB staff member visits the project.

In addition to data directly relevant for the biodiversity monitoring activities under the Gola REDD project (i.e., Standard Operating Procedures, maps, baseline data, scanned field data, training presentations and reports), the database also contains data from other research activities as well as publications, reports and theses that result from the GRC-LG research activities. Following further training by the Research TAs, it is hoped the Research Department will be able to take greater ownership over data management and ensure both raw and clean data sets are well kept and managed.

Relevant publications, reports, and theses

Listed publications, theses, and reports, as well as those resulting from previous and subsequent research activities are stored in the Gola REDD Biodiversity Monitoring data base, and most are available as hard copies in the office of the Research & Monitoring Department. Furthermore, most research publications, theses and reports are made available for the project partners and various stakeholders, such as Njala University and Eastern Technical University Kenema. For this reporting period no publications were produced.

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GOLA RAINFOREST NATIONAL PARK

MANAGEMENT PLAN 2024 - 2029

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GOLA RAINFOREST NATIONAL PARK

MANAGEMENT PLAN

2024 - 2029

Management Plan prepared by and for the Gola Rainforest Conservation LG

August 2024

Approval Page

The implementation of this management plan for Gola Rainforest National Park has been approved by the management of GRC-LG and the following stakeholders:

Thomas Fayia Kamara,
Executive Director,
National Protected Area Authority

Patrick Kanneh Kabba,
Paramount Chief, Nomo,
PC Rep. GRC-LG Board of Directors

Hon. Momoh Bockarie,
Member of Parliament,
Koya and Gaura Chiefdoms

Tiangay Palmer,
Acting Chairman,
Pujehun District Council

Moses Melvin Kanneh,
Moses Melvin Kanneh,
Chariman Representative,
Kailahun District Council

for
Frances Jambawai,
Chairperson,
Kenema District Council

Charles Showers,
President,
Conservation Society of Sierra Leone

Richard Dixon,
Head of the Greater Gola Landscape,
Royal Society for the Protection of Birds

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Acronyms

AOP	Annual Operational Plan
ARTP	Across the River Transboundary Peace Park Project
BSA	Benefit Sharing Agreement
CCB	Climate, Community and Biodiversity
CD	Community Development
GRC-LG	Gola Rainforest Conservation Limited by Guarantee
CSSL	Conservation Society of Sierra Leone
CRS	Catholic Relief Service
EPA	Environmental Protection Agency
GOAL	Irish NGO
GRNP	Gola Rainforest National Park
GCDC	Gola Community Development Committee
FD	Forestry Division
FEC	Forest Edge Communities
FG	Focal Group
GoSL	Government of Sierra Leone
HCV	High Conservation Value
MoECC	Ministry of Environment and Climate Change
NGO	Non-Governmental Organisation
NPAA	National Protected Areas Authority
NTFP	Non-Timber Forest Product
PC	Paramount Chief
REDD	Reducing Emissions from Deforestation and Degradation
RSPB	Royal Society for the Protection of Birds
SILETI	Sierra Leone Timber Industry and Plantation Company
VCS	Verified Carbon Standard
VCU	Verified Carbon Credits
WHH	Welt Hunger Hilfe

Acknowledgements

The Gola Rainforest National Park Management Plan 2024-2029 was prepared in close consultation with the management of GRC-LG as well as other stakeholders including administration of District Governments in the GRNP area and political leaders including Members of Parliament and Paramount Chiefs representing the seven Gola Chiefdoms.

The effective protection and management of the GRNP is assured by the National Protected Area Authority of Sierra Leone, which has delegated the day-today management of the sites to the not-for-profit Gola Rainforest Conservation company (GRC-LG). GRC-LG was created and legally registered adhering to the relevant National Laws. This joint venture solidified the partnership between the Government of Sierra Leone, Conservation Society of Sierra Leone (CSSL), and the Royal Society for the Protection of Birds (RSPB).

GRC-LG was established to act as project proponent for the Gola REDD project and enable the sale of carbon credits validated by the Verified Carbon Standards (VCS) and by the Climate Community and Biodiversity Alliance (CCBA) to provide a stream of sustainable revenue sufficient to significantly reduce emissions from unplanned deforestation activities through effective forest protection and sustainable management of natural resources. The Gola REDD project is the primary source of funding for implementing the activities of the Gola Rainforest National Park Management Plan. The GRNP Management Plan is developed with full recognition and primary goal for the Gola REDD[1] project to meet the Verified Carbon Standard (VCS) and Climate, Community and Biodiversity Standard (CCB).

The revision of the Management Plan for 2024 – 2029 was supported by the European Union through the Support Programme for the Preservation of Forest Ecosystems in West Africa (PAPFor)

[1] Reducing Emissions from Deforestation and Forest Degradation.

EXECUTIVE SUMMARY

VISION AND PURPOSE

The **vision** of the Gola Rainforest National Park is to act as a catalyst for peace, prosperity and national pride in Sierra Leone, supported by the Gola REDD project to be a successful model for replication in other landscapes in Sierra Leone and a model for Africa.

The **purpose** of the Gola REDD project is to conserve the forests, biodiversity, ecological processes and services of the GRNP and wider landscape in perpetuity through effective participatory management, sustained funding and ongoing benefits for the local communities.

PURPOSE OF THE MANAGEMENT PLAN

This management plan builds on the work carried out under the Gola Rainforest Protected Area Management Plan 2014 – 2018 and integrates the activities planned under the Gola REDD Project for the next 5 years. The plan has been produced to provide the Gola Rainforest Conservation LG and stakeholders with strategies and prescriptions that give guidance to achieve set goals. The plan aims to protect the conservation integrity of the GRNP and surrounding area by strengthening the practical and technical capacity of GRNP staff and local community members, establishing effective management systems, and operating procedures, and developing sustainable sources of income for management and livelihoods that enables the GRNP to function in an efficient and effective manner.

The plan covers the following areas:

- The **Protected area** which is the three blocks of the Gola Rainforest National Park (GRNP);
- The **Leakage Belt** which is the area immediately surrounding the three blocks and extending approximately 4km from the National Park boundaries, except for in the east where it is truncated by the Liberian border.
- The **Offsite Zone** which extends from the edge of the leakage belt to the edge of each of the seven chiefdom boundaries.

The management plan provides:

- an updated review of the information relating to the forest in terms of its physical, biological and cultural aspects, and recent management.
- identifies the key values of the site – environmental, biological, and socio-economic - and the threats facing them; and
- presents a series of objectives and activities required for high quality and sustainable management of the area. These objectives and activities are achievable and realistic and are widely accepted as constituting good management practice.

CONSULTATION PROCESS

The management plan is based on the project documents for the Gola REDD project. An extensive consultation process was carried out during the development of the project with the 3 identified primary stakeholder groups (Paramount Chiefs, Landowning families, and Forest Edge Communities) as well as with secondary stakeholders to the project; this process is fully documented in the CCB PD.

Full support is given to the Gola REDD project and thereby the contents of the Management Plan from both primary and secondary stakeholders.

Management Consultation has also been extended to larger Stakeholder process including the GRC LG Board of Directors, Administration of District Governments in the GRNP Area and Political Leaders including Members of Parliament representing the Gola Chiefdoms. Partnership development and stakeholder relationship has grown and will continue to be maintained to recognise policy and administrative interactions to ensure commitment and inclusiveness in decision making and institutional collaboration.

VALUES AND THREATS

The key values of the GRNP and wider landscape (the Gola Rainforest) and the principal threats affecting them are summarised below.

Key Values

The Gola Rainforest has representative values in all six categories of the internationally recognised High Conservation Value (HCV) classification:

HCV 1 Areas containing globally, regionally, or nationally significant concentrations of biodiversity values e.g. the Gola Rainforest constitutes the westernmost part of the Upper Guinea forest belt, which has been classified as one of the 34 most important biodiversity hotspots in the world. The area is also part of WWF's Western Guinean Lowland Forest Ecoregion and BirdLife International's Upper Guinea forests Endemic Bird Area and Gola Forest Important Bird and Biodiversity Area. The area contains at least 60 species which are globally threatened and many species which are either site- or regional endemics.

HCV 2 Globally, regionally, or nationally significant large landscape-level areas where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance e.g. the Gola Rainforest is widely recognised as one of the best remaining fragments of the Upper Guinea forest type in West Africa, supporting many species of plants and animals that do not occur outside of the Upper Guinea forests. The populations of these species are of global significance as local extinction would be detrimental to the survival of entire species. At the national level, the Gola Rainforest contains the largest remaining tract of tropical lowland forest in Sierra Leone.

HCV 3 Threatened or rare ecosystems e.g. the Upper Guinea forests, distributed from Guinea to Togo, have suffered an estimated 50 - 80% loss of forest cover since the beginning of the 19th century. The conservation of the Gola Rainforest is crucial for the survival of this highly threatened habitat and its associated species in Sierra Leone.

HCV 4 Areas that provide basic ecosystem services in critical situations e.g. the Gola Rainforest provides several critical ecosystem services including carbon sequestration, watershed protection, erosion prevention, climate regulation and the supply of wild pollinators for commercial crops.

HCV 5 Areas fundamental to meeting basic needs of local communities e.g. although the available information suggests that the protected area serves more as an additional source for meeting some basic needs rather than being a fundamental source, the project is designed to ensure that Forest

Edge Communities (FECs) will be involved in the co-management of the GRNP and are able to sustainably extract NTFPs and fish as they have done in the past.

HCV 6 Areas critical to local communities' traditional cultural identity e.g. there are sites within the Gola Rainforest that are important for initiation rights and there are also sacred burial grounds.

Other Values

Effective management of the forest and its associated wildlife also has the potential for generating modest levels of income for local communities and the forestry and wildlife sector in Sierra Leone through the **development of nature-based tourism/ecotourism**.

The richness and conservation importance of the area presents many opportunities for **research** which would add significantly to the scientific baseline for West Africa and establish the GRNP as a centre for international research excellence.

As the first REDD project to be developed in Sierra Leone, the innovative approach to planning, financing, and managing the Gola Rainforest being adopted by the partners has the potential to **demonstrate** that protecting forest resources can be both socially and environmentally beneficial. It is envisioned that it will pave the way for future projects of a similar nature that will provide Sierra Leone with a viable sustainable alternative to forest conversion and biodiversity loss.

Key Threats

The main threats facing the area are:

Deforestation and degradation e.g. conversion of forest to the bush-fallow cycle for subsistence agriculture, illegal selective logging and artisanal mining. Deforestation in the Gola Rainforest would reduce the size of the forest blocks and increase their isolation from one another. This would have a direct impact on plant biodiversity and an adverse impact on other taxa as many species are restricted to forest habitats and so are dependent on the availability of forest cover. Mining activities would open the forest to other damaging activities through access roads and the possible use of toxic chemicals. Deforestation would also release significant amounts of CO_2 into the atmosphere which is contrary to the aims of the Gola REDD project.

Disturbance e.g. this represents a threat to biodiversity as many species are susceptible to even small levels of disturbance. Species particularly at risk include the Vulnerable White-necked Picathartes, Critically Endangered Forest Elephant, and the Endangered Pygmy Hippopotamus.

Bush meat hunting e.g. this is known to be one of the most important threats to primate and duiker populations and many of the primates and duikers in the Gola Rainforest are targeted by hunters. A survey in 2012 (Koroma 2012) of bush meat markets found six species of high conservation concern including the Critically Endangered Western Chimpanzee, three Endangered species - Western Red Colobus, Diana Monkey and Black and White Colobus and Pygmy Hippopotamus - and two Vulnerable species - Sooty Mangabey, Olive COlobus. Bushmeat consumption and trade is still high in urban centres.

Active bushmeat market still operate in Eastern City capital – Kenema till date. Several bird species are also susceptible to hunting for food or as pets such as the Endangered Timneh Parrot.

MANAGEMENT PROGRAMMES

To protect the key values of the Gola Rainforest and to address the threats, four management programmes have been developed. The objectives and key activities of each programme are given below.

1. Park Protection Programme

Strengthen the protection strategy and effective management of the GRNP to maintain and enhance its full range of functioning ecological processes and enable the project to be a catalyst for building national policies and regulations for conservation and natural resource management as well as informing relevant regional and international platforms.

- Patrolling
- Effective communication with all stakeholders
- Maintenance of boundaries
- Transboundary coordination and collaboration
- Dissemination of best practice
- Advocacy.

2. Community Partnership and Sustainable Development Programme

Create an enabling environment for neighbouring communities to act as committed environmental stewards of the natural resource base that underpins their livelihoods through activities that enhance, generate value from and materialise the benefits derived from the Gola Rainforest's forests and sustainable land use practices.

- Increase productivity of existing and novel agricultural crops, both commercial and food crops
- Reduce human-wildlife conflicts.
- Implementation of effective Community Based Natural Resource Management practices, including co-management of areas.
- Improved organisation and capacity of small holders
- Development of small-scale ecotourism
- Improved access of local communities to health, education and financial services and opportunities
- Benefit Sharing Agreements.
- Promote environmental education and awareness.

3. Research and Monitoring Programme

Develop and maintain a comprehensive socio-economic and biodiversity database and associated monitoring system to ensure the availability of accurate, relevant, and timely information to inform and enhance project management and the effective delivery of outcomes.

- Research and monitoring of key species, habitats, environmental and socio-economic factors to inform future management.
- Development of Conservation Action Plans

- Maintenance of a research database
- Dissemination of research results
- Develop the GRNP as an international centre of excellence for tropical forest research and management as well as a research ground for socioeconomic and anthropological studies.

4. Operational Effectiveness Programme

Enable effective management through the implementation of best practice administrative and financial systems and the provision of necessary staff training, resourcing, and equipment.

- Robust and transparent financial and staff management procedures
- Provision of infrastructure, equipment, and training
- Culture of teamwork, respect, and excellence

PLAN IMPLEMENTATION

A management plan is a tool, not an end, and should be viewed as a practical, working document. Additionally, management planning is an ongoing process, and the management plan should form part of a constantly evolving and developing system which adapts to changing situations, experience gained, successes and failures but always directs activities towards the long-term conservation and sustainable management of the site. Day to day management of the site will be through the implementation of Annual Operational Plans and the effectiveness of operations should be reviewed at least annually.
A comprehensive review of the entire plan should be carried out after 5 years and new objectives and activities developed for the next 5-year period.

WIDER CONTEXT

Sierra Leone has ratified several international conventions related to protecting and conserving the natural environment, including the Convention on Biological Diversity, the Climate Change Convention, the Ramsar Convention, CITES and the World Heritage Convention. Successful implementation of the Gola REDD project and as part of it this management plan will make a significant contribution to fulfilling the Government's commitments under these conventions.

PART ONE: INTRODUCTION AND BACKGROUND INFORMATION

A. INTRODUCTION

Between 1961 and 1989, some 28% of Gola Forest was subject to commercial logging (Iles et al. 1993). Logging took place at varying intensities, ranging from less than 1m³ ha-1 to over 30 m3 ha-1. The southern parts of Gola are more accessible and so were more intensively logged (42.5% of the area) than the more rugged northern parts (19% of the area).

The Gola Forest Reserves and the Kambui Hills Reserves constituted most of the Kenema Sawmill Series supply area. Multiple small private contractors in the Kenema area had also initiated plans to harvest timber in "salvage" areas outside Forest Reserves, but only two have been implicated in economic exploitation within the Reserves: Forest Industries Corporation (FIC), a Sierra Leonean company acting under the Ministry of Trade and Industry, and Sierra Leone Timber Industries (SILETI), an Italian-Sierra Leonean company. Despite a 25-year concession agreement, SILETI operated from 1976 to 1993. FIC, on the other hand, has been operating in Gola North (current Gola Central) since the 1960s, and Gola East and West (current Gola South) were added to their concession when SILETI left in 1984 (Davies 1987).

When commercial logging in Gola failed (for a variety of reasons) there appeared to be an opportunity to promote the conservation of the rainforest. Starting in the 1980s with the work of Dr. Glyn Davies (Davies 1987), a range of actors including the RSPB (Royal Society for the Protection of Birds) and CSSL (Conservation Society of Sierra Leone) worked together with the national government of Sierra Leone to establish a conservation programme in the Gola Rainforest.

The GRNP was declared a National Park on 24 November 2010 by statutory instrument number 15-2010. The limits of the National Park were published in the Sierra Leonean Gazette on 16 December 2010[2]. A detailed description of the original designation of the Gola Forest Reserves and previous management is provided in the Gola REDD project documents and is summarised in table 1 below.

TABLE 1. KEY DATES IN THE HISTORY AND MANAGEMENT OF GOLA RAINFOREST NATIONAL PARK

Date	Brief details
1926 – 1930	Gola Forest Reserves designated – 58,923.40 ha.
1956-1963	Extensions to Gola North designated – 15,979.65 ha. Total reserve area increased to 74,903.05 ha
Late 1980s to date	Collaborative research and conservation work carried out by RSPB, CSSL and the Government of Sierra Leone.
2002	Gola Conservation Concession Framework officially established to develop a multi-stakeholder approach to the conservation and management of the Gola Forest Reserves.

[2] The boundaries of the national park were demarcated on the ground during project development in coordination with the villages neighbouring the Park and have subsequently changed from those which were published in the gazette. The formal process for updating the boundary schedule will be carried out as one of the activities of the project.

2003	Local communities' cooperation agreement signed.
2004	First Forest rangers begin patrols on the ground
2006	Scoping study carried out to investigate long term financing strategies for protected areas in Sierra Leone concludes that REDD financing has potential
2007	Cooperation and Benefit Sharing Agreement between the local communities. And partners (National Commission on the Environment and Forestry – NaCEF, RSPB, CSSL and the seven Chiefdoms) signed
2008	First REDD feasibility study carried out for Gola forests by Eco-securities concludes that REDD could create sustainable funding for the management of the GRNP
2009	First comprehensive management plan finalised (2007-2012)
2010	Gola Rainforest National Park declared on 25 November – see appendix 1.
2011	Second REDD feasibility study and preparations begin to develop a REDD project
2012	1st August, Gola REDD Project start date
2012-2013	Agreements signed between landowner representatives and the Government to exchange carbon rights for project benefits. National Park boundaries are demarcated on the ground in agreement in the 86 Forest Edge Communities sharing a direct border. Numerous meetings and dialogue held with Forest Edge Communities and other stakeholders to develop the Gola REDD project activities with the FPIC of those involved
2013	Gola Rainforest National Park on Sierra Leone's tentative list for World Heritage Site Nomination
2014	Gola Rainforest Conservation LG established to act as project proponent for the Gola REDD project and enable the sale of carbon credits validated by the Verified Carbon Standards (VCS) and by the Climate Community and Biodiversity Alliance (CCBA) to provide a stream of sustainable revenue sufficient to significantly reduce emissions from unplanned deforestation activities through effective forest protection and sustainable management of natural resources. REDD Benefit sharing agreement signed by GRC LG and the 7 Chiefdoms
2015 -2018	Gola Rainforest National Park carried out the first verification process based on REDD+ and earn the first set of carbon credits
2019 – 2022	Gola Rainforest National Park REDD+ Programme due to prepare another REDD+ Verification process to earn more credit for sustainable financing of GRNP Forest Protection and support to integrated agriculture and livelihoods support for Gola communities. Benefit Sharing Agreement revised, and its scope widened to enhance community benefits from the REDD+ Funds
2023	Gola Rainforest National Park joined in the preparation of dossier for the Tiwai-Gola Forest complex submission to the World Heritage Commission
2024	Gola Rainforest National Park commenced the processes for submission of its third verification for carbon credits

B. DESCRIPTION OF THE GOLA RAINFOREST NATIONAL PARK

1. SITE INFORMATION

1.1 Location

The Gola Rainforest National Park is in the southern part of Sierra Leone, 30km south-east of the district headquarter town of Kenema and 260 km east of Freetown, the nation's capital. The eastern section of the protected area lies adjacent to the River Moro and Mano and the international border with Liberia. To the south the area is bisected by the Kenema-Zimmi highway. The National Park lies within three districts: Kailahun, Kenema and Pujehun (see Figure 1)

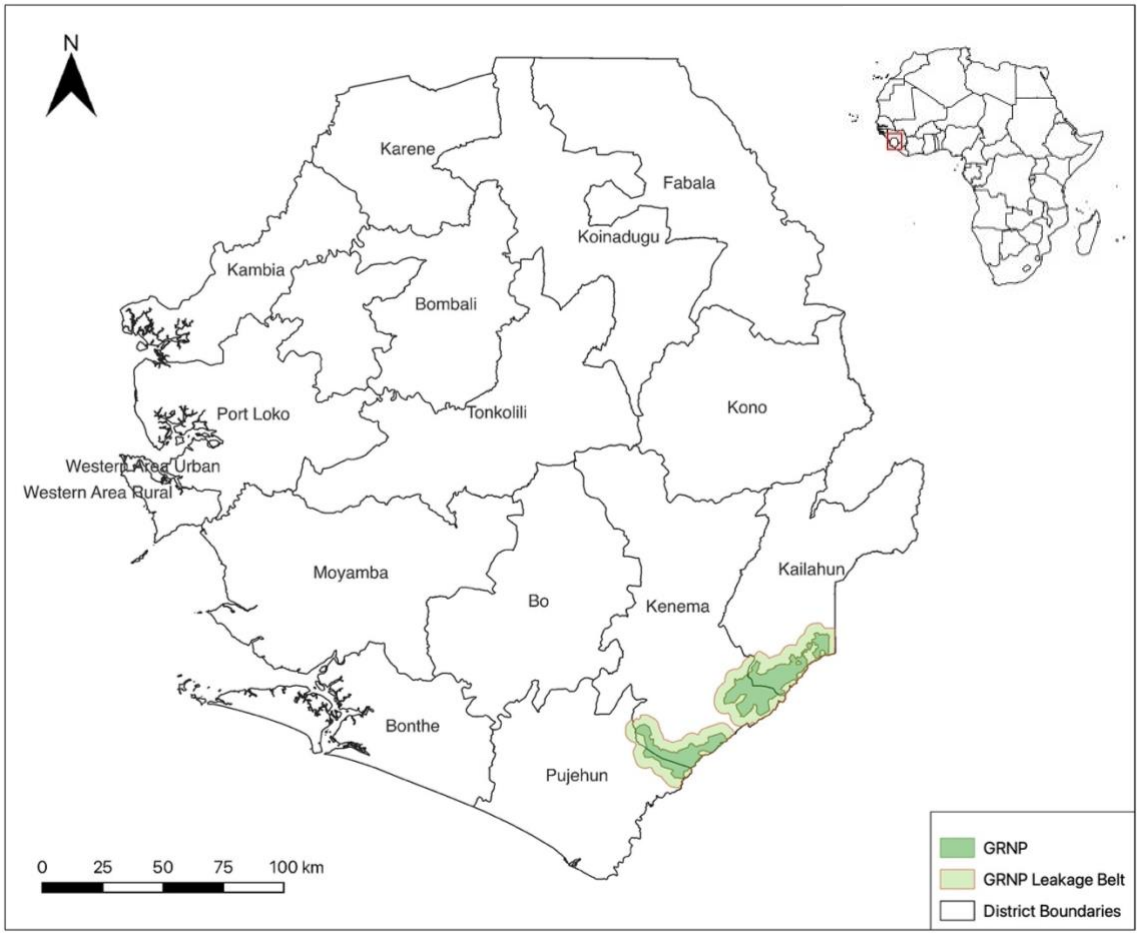

FIGURE 1. NATIONAL AND ADMINISTRATIVE SETTING OF THE GOLA RAINFOREST NATIONAL PARK

The Gola forests are the largest area of tropical forest remaining in Sierra Leone and form part of the Upper Guinea forest system which is classified as one of the 34 most important biodiversity hotspots in the world (Myers et al. 2000, Conservation International website, 2013). The Gola forests are a key biodiversity stronghold for many endangered and threatened bird and mammal species and are also politically important as they form part of a larger trans-boundary peace area designed to assist in establishing permanent peace in a previously troubled cross-border region.

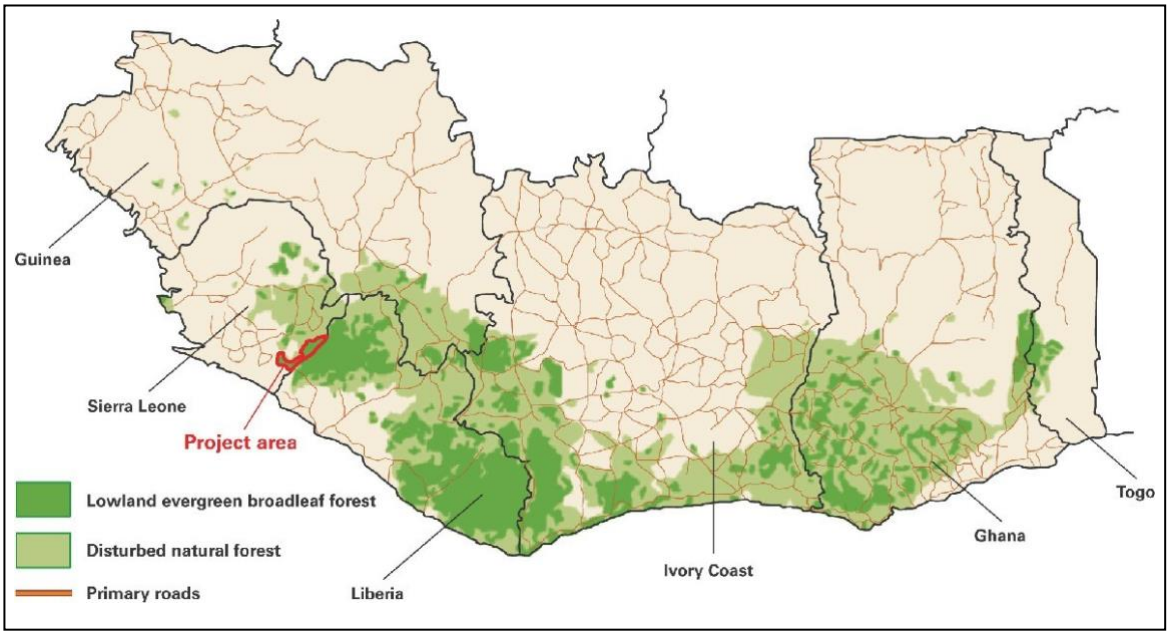

FIGURE 2. LOCATION OF THE NATIONAL PARK WITHIN THE UPPER GUINEA FOREST ZONE

1.2 Area and Extent

As mentioned in the Definition of the Management Planning Area, this Plan uses the following definitions to describe the different parts of the operational area (see Figure 3):

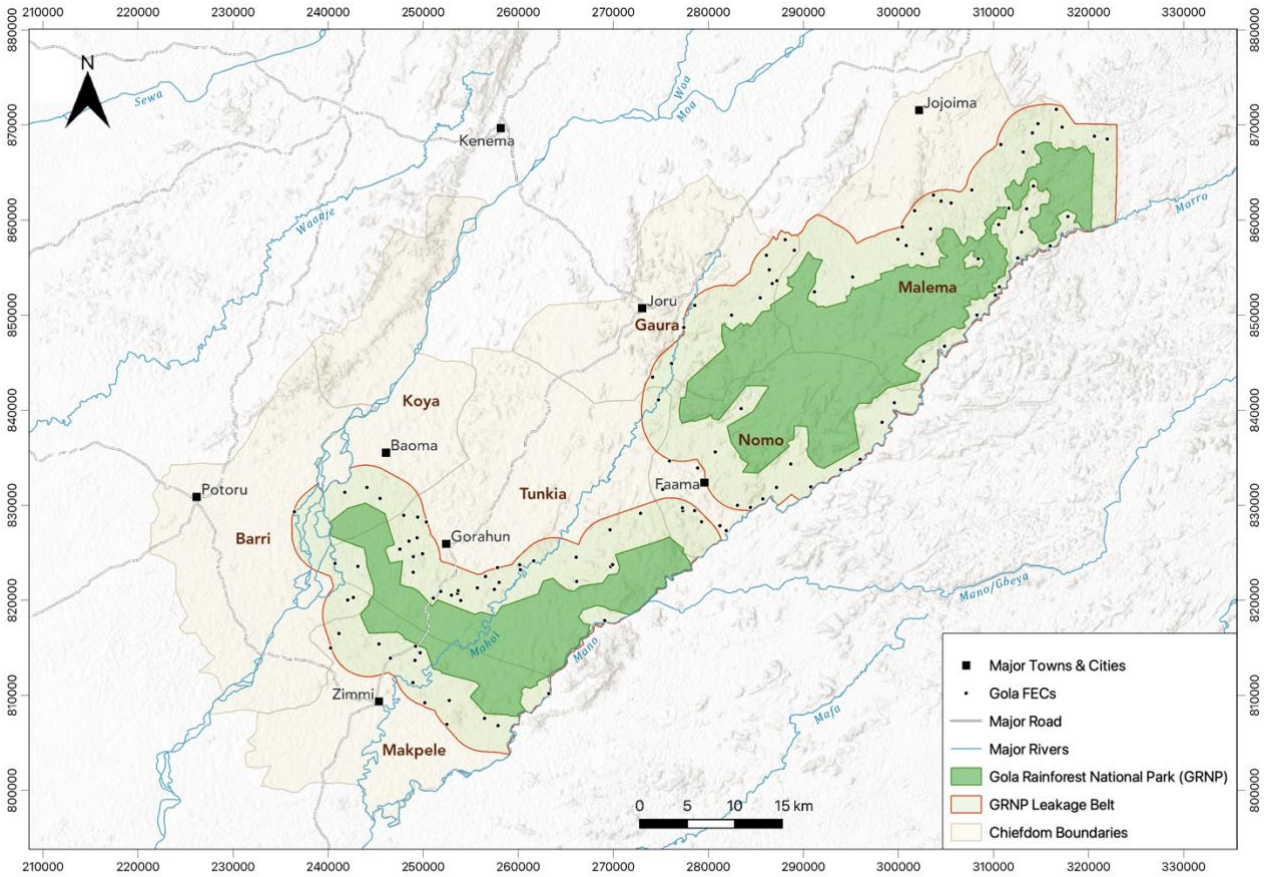

FIGURE 3. BOUNDARIES OF THE GOLA RAINFOREST NATIONAL PARK, LEAKAGE BELT AND SEVEN GOLA CHIEFDOMS

National Park – the demarcated boundary of the GRNP consists of three separate blocks; Gola North (53.7 km²), Gola Central (385.8 km²) and Gola South (260.1 km²). These are also the boundaries of the "project area" of the Gola REDD carbon project and over which the Gola Rainforest Conservation LG[3], the project proponent, has management control. This area is 69,174 ha, 68,515 ha of which is forested[4]. There exists one enclave in the Park – Wagikoh – in the Gola central section of the National Park. It is mapped and a limit of land use (30.5 ha) is clearly agreed and set aside for Wagikoh.

Leakage belt –the forested and non-forested area that immediately surrounds the National Park, extending for 4km around each block of the protected area except on the eastern side where it is truncated by the Sierra Leone-Liberian border. The leakage belt was defined to meet the requirements of the VCS methodology VMD0007 and together with the National Park comprise the "project zone" definition for the Gola REDD project. However, it also functions as a buffer zone including both forested and non-forested land totaling 90,864 ha. The leakage belt contains 122 inhabited Forest Edge Communities[5] including the Wagikoh enclave located in the North-western part of Gola Central.

Offsite zone –the area beyond the leakage belt and extending to the boundaries of the seven Chiefdoms, it contains approximately 468 communities and 254,831 people.

1.3 Administrative Authority

The Gola Rainforest lies mostly in the Eastern Region of Sierra Leone but extends marginally into the Southern (Bo) Region. It lies in three districts – Kenema, Kailahun and Pujehun (see Figure 1).

There are seven Chiefdoms covering the GRNP: Malema, Gaura, Nomo, Tunkia, Koya, Barri, and Makpele (see Figure 3 and Table 2). A dual system of governance operates in the provinces of Sierra Leone; land is governed by customary rules and areas are divided into Chiefdoms, overseen by Paramount Chiefs and other traditional authorities. These Chiefdoms are the landowners of the forest, but the legislative and administrative authority lies with the National Protected Area Authority of the Ministry of Environment and Climate Change.

TABLE 2. ADMINISTRATIVE AUTHORITIES OF THE GOLA RAINFOREST NATIONAL PARK

	Forest areas	Host Chiefdom	Host District
1	Gola North (former Gola North extensions*)	Tunkia, Gaura, Nomo, Malema	Kenema, Kailahun
2	Gola Central (former Gola North*)	Tunkia, Gaura, Nomo, Malema	Kenema, Kailahun
3	Gola South (former Gola East and Gola West*)	Tunkia, Barri, Makpele, Koya	Kenema, Pujehun

* prior to National Park designation in 2010 when the site was a production Forest Reserve

[3] The official title of the managing authority is the Gola Rainforest Conservation Company Limited by Guarantee but when written this is reduced to Gola Rainforest Conservation LG.

[4] The newly demarcated National Park or protected area is considerably smaller than the area originally gazetted as a production forest reserve. The reasons for this are fully described in Marris et al 2013.

[5] A Forest Edge Community is defined as a community lying adjacent to the protected area and within the leakage belt of the Gola Rainforest. Many Forest Edge Communities (86 out of 122) also share a direct boundary with the protected area.

1.4 Access

The GRNP is accessible by laterite roads from Kenema. Gola Central is accessible by two main routes; one runs due north, the other south from Kenema. The northern half of Gola North is accessible by a paved road that passes through Daru and Jojoima. This road leads to the forest-edge villages of Teyama, Jidda, Madina and Fobu which represent the farthest motorable points to the National Park from where footpaths lead into the forest. The southern route follows the Kenema-Zimmi highway from which there are two branching points, Joru and Perri Junction. From Joru, Lalehun, a village very close to the far west of the National Park, can be reached by a laterite road. This road provided the main access for timber extraction by the Forest Industries Corporation in the 1960s and 1980s. The southern part of Gola North is accessed by a laterite road originating from Perri Junction on the Kenema-Zimmi highway. This road leads to two forest-edge villages, Belebu and Faama. Footpaths lead from these villages to the forest.

Gola South is accessible via the Kenema-Zimmi highway which bisects this forest block between Nemahugoima and Pewaa villages. The far west of the GRNP is accessible by a paved road running from Bo to Zimmi.

However, much of the GRNP has difficult or poor access routes, particularly to areas in the east and along the Liberian border. Old logging tracks run through the centres of both Gola Central and Gola South, including approximately 13 km of track from Lalehun to the old Koyai river camp, and 9km of track from the former Sierra Leone Timber Industry and Plantation Company (SILETI) sub-station to the Mahoi Bridge. Much of these are overgrown and will not be reopened, as ease of access can encourage illegal activities. Footpaths occur throughout the GRNP used by both staff of GRC-LG and communities to access villages on the far side of the National Park.

2. BIOPHYSICAL DESCRIPTION

2.1 Climate

The Gola Rainforest lies within the wet tropical climatic zone. Historical and recent precipitation data is available from towns and villages in the project and offsite zone. White (1972) reports mean annual rainfall values of 2576 mm at Daru, 2605 mm at Pendembu and 2770 mm at Kenema. Cole (1993) reports 2630 mm for Zimmi, 2739 mm for Kenema and 2747 mm for Daru. Based on this data mean annual rainfall is likely to be 2500-3000mm. In 2006 the total annual rainfall for Kenema was 2188 mm, which is lower than the historical average. During 2007 rainfall was measured within the forest of the Gola Rainforest at three sites each month – see figure 4 - and the mean annual total for the three sites was 3117mm, slightly higher than the historical average. Rain was recorded every month; there is a pronounced dry season from December to March during which rainfall was less than 50 mm per month. The wettest months are July and August when rainfall was over 550mm per month.

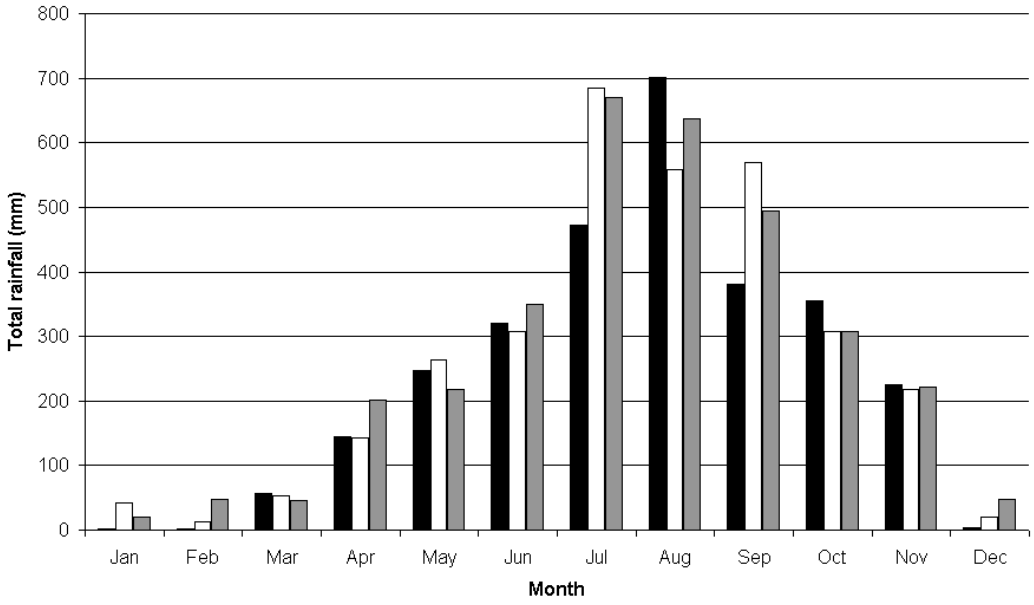

FIGURE 4. ANNUAL RAINFALL DATA FROM 3 RECORDING STATIONS WITHIN THE GOLA RAINFOREST IN 2007

2.2 Geology and Soils

2.2.1 Soils

The Gola Rainforest is characterised by ancient crystalline rocks of the Archaen subdivision of the Precambrian period (Wilson, 1965). The granite greenstone complex, common in this area, contains iron- and magnesium-rich metamorphic rocks overlying a quartz-rich granite basement. Metamorphism gave rise to local occurrences of granulitic materials which are characteristic in parts of the protected area. Most of the ores of chromium, gold and iron are located in the strips of metamorphic rocks that permeate the dominating granite (see map 4).

The soils in the Gola Rainforest are mostly derived from granite. They are usually freely draining sands and gravels, with varying proportions of lateritic gravel. Four types of soil are recognized in the protected area (Iles et al 1993):

1. Kalufaga. Rocky hill complex of moderate to high relief on Precambrian granite complex and local amphibolites; shallow sandy clay loams with locally deeper reddish clay loams;
2. Kailahun. Strongly dissected high level plains of low to very low relief and scattered isolated hills, on Precambrian granite complex and local granulite's; moderately shallow to deep, sandy clay loams to clays often containing much gravel;
3. Blama. Dissected plains of extremely low relief with scattered small hills and terraces, on Precambrian granite complex and local granulite's; moderately deep, very gravelly reddish clay loams to clays;
4. Sandaru. Variable dissected complex of plains and rocky hills of low to moderate relief, on Precambrian granite complex; moderately shallow to deep, sandy clay loams, gravelly on hilly terrain.

Soils found in valley bottoms and terraces are the deepest and most fertile.

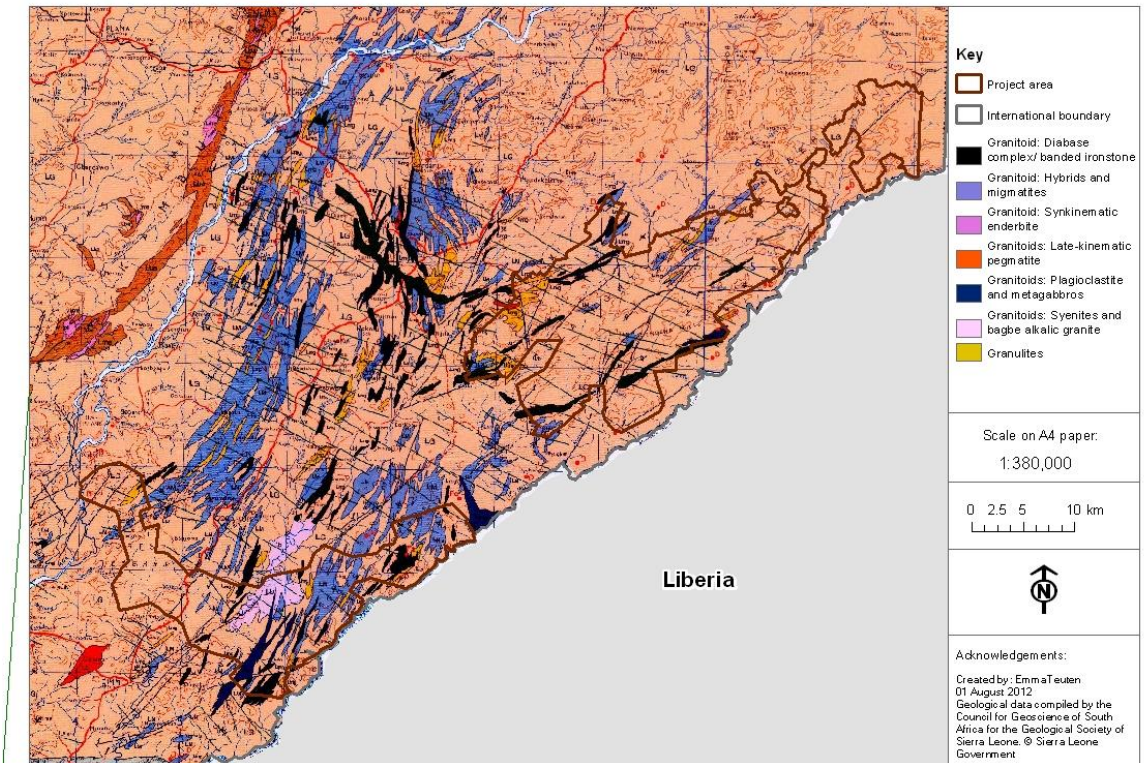

FIGURE 5. GEOLOGY OF THE GOLA RAINFOREST

2.2.2 Geomorphology

The central area of the Gola Rainforest contains the most varied geomorphologic features (see map 5). Extensive rolling hills in this area form more rugged terrain and isolated rocky outcrops, some of which exceed 130m in length and 22% are over 330m in elevation. Over 9% of this area consists of steep slopes. The highest point, 427m, is known as Sangie Mountain. Slopes exceeding 27 degrees are common, and slopes of up to 45 degrees occur in the north and eastern parts of this area.

The southern part of the Gola Rainforest is lower than the central and northern areas and becomes progressively lower and more uniform in slope from east to west. The highest point in this area is Bagra Hills at 330m in the east. The hilly terrain in this area is crossed by numerous water courses which form steep sided valleys.

The combination of richer soils and easier access in the low-lying sections of the protected area mean that these areas have been the most heavily exploited in terms of both logging and agriculture.

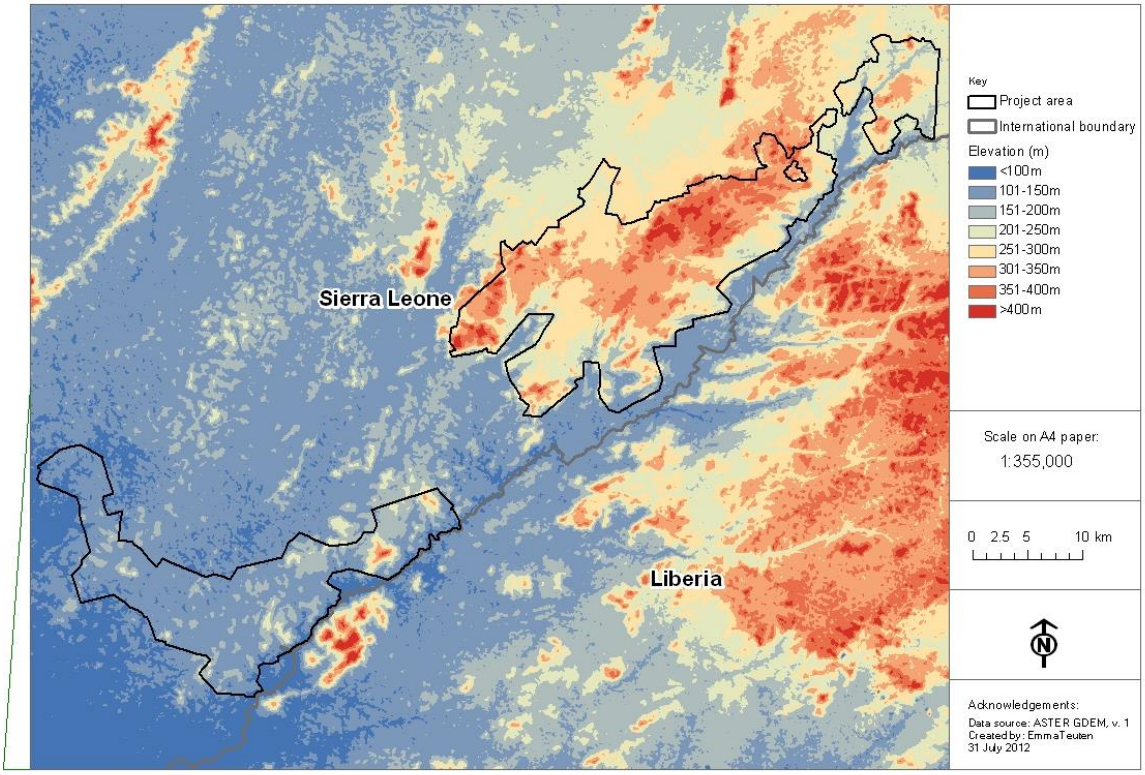

FIGURE 6. GEOMORPHOLOGY OF THE GOLA RAINFOREST

2.3 Hydrology

The Gola Rainforest covers important catchment areas for the Moro, Mahoi, Mano and Moa Rivers which are the main water supplies for local villages and towns (see map 6).

The north-eastern area of the Gola Rainforest is drained by the Moro River which runs along the eastern boundary. The region is well drained with elevated hilly terrain; only 8-9% of its area is under streams, swamps or poorly drained terraces.

The central area of the Gola Rainforest is also drained by the Moro River running along the eastern boundary. This part of the Gola Rainforest is intersected by a series of water courses and seasonally dry valleys. The most important water course to originate in this part of the Gola Rainforest is the Mogbai River which flows east into the River Moro and has a catchment of approximately 52 km^2 and an area of swampy terrain.

As the Moro River flows south, it flows into the Mano River which runs along the eastern boundary of the southern area of the Gola Rainforest. The eastern section of this area feeds the Mano River via a series of small rivers and streams that are no longer than 15 km, for example the Watuma, Wemango and Weadia, and as a result is well drained. The central area in the south is drained by a network of small streams which feed into the Mahoi River. The western part of the southern area is poorly drained with up to 18% of the area classed as waterway, swamp or poorly drained land. Streams in this area feed into the adjoining Moa River.

The watershed services provided by the Gola Rainforest are vital to local and regional economies which are based on subsistence and cash crops.

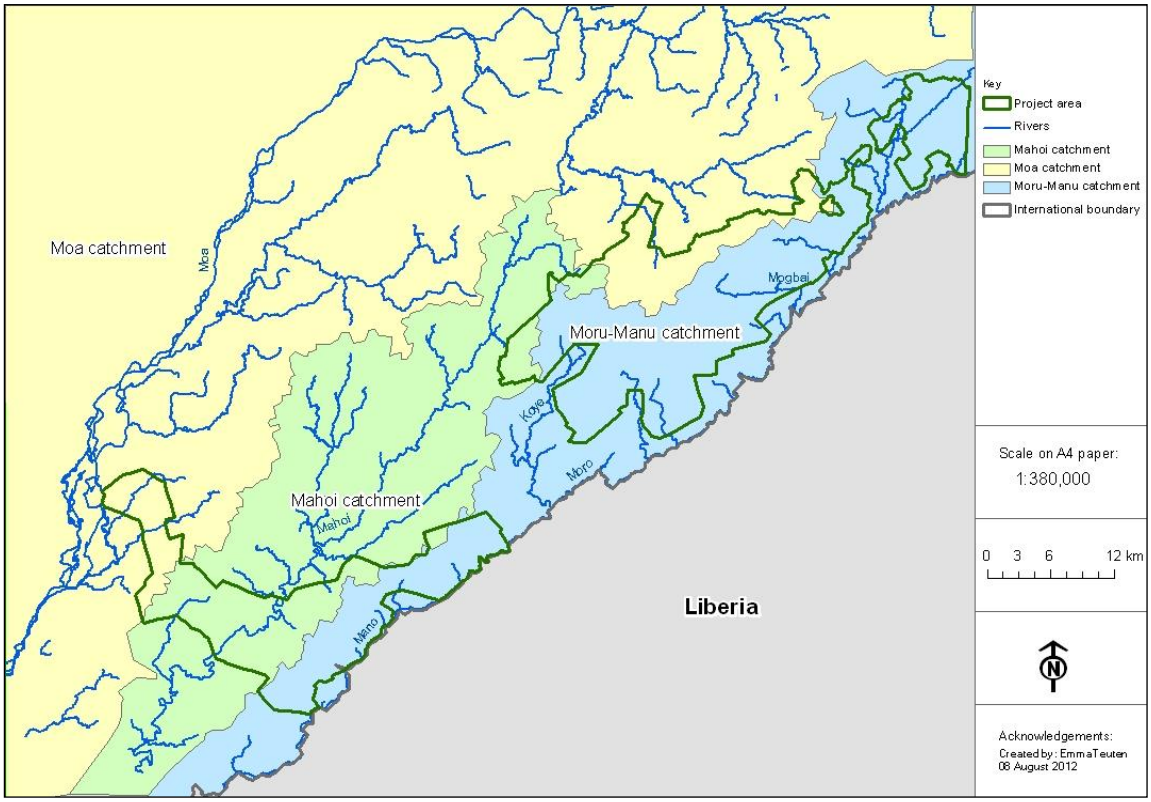

FIGURE 7. WATERSHEDS AND CATCHMENTS OF THE GOLA RAINFOREST

2.4 Biodiversity

The Gola Rainforest is extremely rich in biodiversity and harbours many species that are threatened or endemic to the Upper Guinea Forests (see map 7). The flora and fauna of the Gola Rainforest have been thoroughly surveyed, both before and after the civil war. The results of these surveys have been published in the scientific literature and in various unpublished reports (see references for the Gola REDD project documents). A brief description of the biodiversity in the Gola Rainforest and the factors threatening it is given below.

2.4.1 Vegetation Types

From analysis of satellite images, rainfall, temperature and tree species composition, the forest is best classified as evergreen moist forest (White 1972), with an overall forest cover within the protected area of 68,515 hectares. From Cole's (1993) classification and baseline surveys carried out in 2005 – 2007 (Klop et al. 2008) the main vegetation types in the protected area can be characterised as follows:

- **Evergreen forest**: Characteristic species include *Heritiera utilis, Brachystegia leonensis, Calpocalyx aubrevillei* and *Sacoglottis gabonensis*. In wet areas *Uapaca guineensis* and *Protomegabaria stapfiana* are common. This forest type is most common in the central and northern parts of the protected area, where H. utilis is the dominant tree species.
- **Moist semi-deciduous forest**: Dominated by species such as *Cynometra leonensis*, *Parinari excelsa, Parkia bicolor* and *Piptadeniastrum africanum*. These species are common on moist soils at lower altitudes, whereas the steep rocky slopes are characterised by *Erythrophleum ivorense* and *Nesogordonia papaverifera*. This forest type is found mostly in the southern parts of the protected area.
- **Freshwater inland swamp forest:** This forest type predominates on poorly drained soils of inland valleys and seasonally flooded forest along rivers, in both evergreen and semi-deciduous forest. Raphia palms may be dominant, whereas characteristic tree species include *Uapaca spp., Nauclea diderrichii* and *Newtonia duparquetiana*
- **Forest regrowth and secondary forest:** Intensively logged and previously farmed areas in the protected area support tree species like *Carapa procera, Macaranga barteri* and *Musanga cecropioides*.

2.4.2 Plant Diversity

The Upper Guinea Forests are species diverse, with some 2800 species of vascular plants known to occur in these forests (Jongkind 2004), of which about 650 (23%) are endemic to the region.

More than 1,000 species of plant are known to occur in the Gola Rainforest of which 232 are tree species; the most common family is Leguminosae, with common species such as *Cynometra leonensis* and *Brachystegia leonensis*. However, the dominant tree species is *Heritiera utilis* (Sterculiaceae) (Klop et al 2008). The understorey is dominated by *Diospyros* spp., especially *D. heudelotii* (Klop et al. 2008).

IUCN Red List assessments for plants are incomplete, nonetheless at least 33 globally threatened species have been recorded in recent years including two, *Tieghemella heckelii and Placodiscus pseudostipularis,* that are classified as Endangered and 31 classified as Vulnerable (www.iucnredlist.org, 2012). A further six Vulnerable species are known from previous surveys. Poorter et al. (2004) classified 278 woody plants in the Upper Guinea forests as rare or threatened based on extent of distribution and threats from human exploitation. Of these, 67 have been

recorded in the Gola Rainforest in recent surveys and a further two are known from previous surveys. 599 forest species are endemic to the Upper Guinea forests, of which 120 have been found during surveys.

Of the 71 species of orchids identified in the Gola Rainforest, seven are thought to be endemic to the Upper Guinea Forest (Klop et al., 2008). According to Jongkind (2004), there are about 25 species of Orchidaceae endemic to the Upper Guinea Forest. Therefore, the Gola Rainforest contains almost 1/3 of the Upper Guinea endemics in this family.

Plant species of conservation concern are listed in Table 3 below.

TABLE 3. GLOBALLY THREATENED PLANTS IN THE GOLA RAINFOREST

Species	IUCN status
Plants	
From previous surveys but also recorded in 2006 survey by Prof. Ake Assi	
Albizia ferruginea	Vulnerable
Entandrophragma angolense	Vulnerable
Entandrophragma cylindricum	Vulnerable
Homalium letestui	Vulnerable
Lovoa trichilioides	Vulnerable
Tieghemella heckelii	Vulnerable
Trees	
From project survey plots	
Afzelia africana	Vulnerable
Anopyxis klaineana	Vulnerable
Copaifera salikounda	Vulnerable; rare in Upper Guinea
Cordia platythyrsa	Vulnerable
Cryptosepalum tetraphyllum	Vulnerable; rare in Upper Guinea
Entandrophragma utile	Vulnerable
Heritiera utilis	Vulnerable; rare in Upper Guinea
Homalium letestui	Status Uncertain; West Africa Endemic
Irvingia gabonensis	Near threatened
Lophira alata	Vulnerable
Nauclea diderrichii	Vulnerable
Terminalia ivorensis	Vulnerable

2.4.3 Vegetation Condition

Prior to the initiation of a conservation project, the Gola Forest Reserves were classified as Production Forests and until the late 1980s two large scale timber companies conducted commercial logging in the protected area, the Forest Industries Corporation (FIC) and The Sierra Leone Timber

Industry and Plantation Company (SILETI). FIC worked in the accessible areas of the western section of Gola Central in 1961, 1978 and during the period 1984-1986. Some 19% of Gola Central was exploited during this period. Gola South was more extensively logged by both FIC and SILETI during the 1960s, 70s and 80s; operations finished in 1989. Some 43% of Gola South has been exploited, particularly the western and central sections (Iles et al. 1993).

As a result of past management practices, the southern block of the protected area in particular is still regenerating and has not yet reached an equilibrium state, the central area was less impacted by logging and contains greater carbon stocks (Lindsell and Klop, 2012).

2.4.4 Fauna

2.4.4.1 Birds

The protected area is listed as an Important Bird Area (Fishpool and Evans 2001) and holds a high proportion of the threatened and endemic species of the region and a good representation of Guinea-Congolian forest biome species. Many of these species are also present in the community forests around the Gola Rainforest (Demey 2011). Recent bird surveys (Klop et al. 2010) recorded 294 species in the Gola Rainforest bringing the total known from the area to 327, which is amongst the highest of the Upper Guinea Forests. Several of these species can be considered as flagship species for the conservation of Upper Guinea Forest and include White-necked Picathartes, Rufous Fishing-Owl, White-breasted Guinea fowl and Gola Malimbe. Besides the high species diversity, several threatened species occur in good numbers. Ten globally threatened species have been recorded – see table 4.

TABLE 4. GLOBALLY THREATENED BIRD SPECIES IN THE GOLA RAINFOREST

Species	Scientific name	IUCN status
White-breasted Guinea fowl	*Agelastes meleagrides*	VU
Timneh Parrot	*Psittacus timneh*	EN
Rufous Fishing-Owl	*Scotopelia ussheri*	VU
Brown-cheeked Hornbill	*Bycanistes cylindricus*	VU
Yellow-casqued Hornbill	*Ceratogymna elata*	VU
Western Wattled Cuckoo-shrike	*Lobotos lobatus*	VU
Yellow-bearded Greenbul	*Criniger olivaceus*	VU
Nimba Flycatcher	*Melaenornis annamarulae*	VU
White-necked Picathartes	*Picathartes gymnocephalus*	VU
Hooded Vulture	*Necrosyrtes monachus*	CR

Nearly 80 of the bird species in the Gola Rainforest are largely restricted to forest habitats, although some may occasionally occur at the ecotone of forest and more open habitats. Another approximately 100 species occur in forest but are also frequently found in other habitats such as forest edges or clearings inside the forest. Nine species appear to be restricted to primary forest: Lemon Dove, Black-collared Lovebird, Shelley's Eagle-Owl, Brown-chested Alethe, Nimba Flycatcher, Dusky-crested Flycatcher, Yellow-bellied Wattle-eye, Lagden's Bush-shrike and Gola Malimbe. In addition, Lyre-tailed Honeyguide is largely restricted to primary forest, with only a few records from tall secondary forest. With the exception of Lyre-tailed Honeyguide and Yellow-bellied Wattle-eye, most of these species are rare or uncommon. The conservation of these species depends entirely on

the preservation of large tracts of undisturbed closed-canopy forest, and the protected area can be considered essential to the survival of these species in Sierra Leone.

Although some of the true forest specialists are missing from the community lands in the buffer area of the Gola Rainforest, the areas surrounding the protected area hold good numbers and diversity of birds (Demey, 2011). Many of these species are restricted to forest edges, open country and farm bush. Around 80 species found in the Gola Rainforest do not normally occur inside forest, although some were found in large clearings inside the forest. The species in the community lands comprise a gradient from 'forest-oriented' to 'farm bush-oriented' species. Species that are normally found close to, or sometimes in, forest include Violet-backed Hyliota, Dusky-blue Flycatcher, Capuchin Babbler and Splendid Starling. A number of species do not enter forest and are restricted to open farm bush. These include Double-spurred Francolin, Common Bulbul and Pied Crow. Around 25 species are regularly recorded in all habitats and include Palm nut Vulture, Western Nicator and Velvet-mantled Drongo. Most of the farm bush species and habitat generalists are common and widespread throughout (West) Africa, and none of these species is currently threatened or likely to become so in the near future. The exception is Hooded Vulture which has recently been up listed to Endangered.

2.4.4.2 Mammals

An overview of the mammals in the Gola Rainforest is given by Lindsell et al. (2011). 49 species of large mammal are known to occur, of which nine species are currently considered to be threatened or endangered - see table 5. Two species are listed as Critically Endangered, seven species as Endangered and five as Vulnerable. Several species of ungulates that are known to occur in the Gola Rainforest are endemic to the Upper Guinea forests. This includes Jentink's Duiker and Zebra Duiker, and Brooke's Duiker. Pygmy Hippopotamus is also endemic. Black Duiker and Maxwell's Duiker are both near-endemic to the Upper Guinea forests.

Despite 11 years of civil war in Sierra Leone, it appears that the mammal fauna of the Gola Rainforest has survived relatively intact and that the Gola Rainforest continues to be an important site for the conservation of threatened Upper Guinea forest wildlife, and the most important site for these species in Sierra Leone. No large mammal species was extirpated during the war and previously unrecorded species have been discovered in recent years. Some of the most threatened species continue to have healthy populations in the forest, especially primates, and have shown little or no sign of reduced abundance. However, the population of African Forest Elephants collapsed during the war, with only a few individuals remaining from approximately 110 in the mid-1980s (Lindsell et al. 2011).

TABLE 5. THREATENED MAMMAL SPECIES RECORDED IN THE GOLA RAINFOREST, BASED ON LINDSELL ET AL. (2011).

Species	Scientific name	IUCN status	Endemic to
Cercopithecidae			
Western Pied Colobus	*Colobus polykomos*	EN	Upper Guinea
Western Red Colobus	*Procolobus badius*	EN	Upper Guinea
Olive Colobus	*Procolobus verus*	VU	Upper Guinea
Sooty Mangabey	*Cercocebus atys*	VU	Upper Guinea
Diana Monkey	*Cercopithecus diana*	EN	Upper Guinea
Hominidae			
Western Chimpanzee	*Pan troglodytes verus*	CR	
Hippopotamidae			
Pygmy Hippopotamus	*Choeropsis liberiensis*	EN	West Africa
Bovidae			

Zebra Duiker	*Cephalophus zebra*	VU	Upper Guinea
Jentink's Duiker	*Cephalophus jentinki*	EN	Upper Guinea
Elephantidae			
African Forest Elephant	*Loxodonta cyclotis*	CR	West Africa
Felidae			
Leopard	*Panthera pardus*	VU	
Manidae			
White-bellied Pangolin	*Pathaginus tricuspis*	EN	
Black-bellied Pangolin	*Phataginus tetradactyla*	VU	
Giant Pangolin	*Smutsia gigantea*	EN	

Eleven primates are known to occur in the Gola Rainforest, including one ape and three prosimians. The Endangered Western Red Colobus is common but is mostly restricted to the less disturbed areas of the central and northern parts of the protected area. In 2019 Diana Monkeys and Western Pied Colobus were assessed as Endangered on the IUCN Red List, when previously they were listed as Vulnerable, and are similarly forest dependent. The Vulnerable Sooty Managabey is also abundant within GRNP. However, the only other Vulnerable primate, the Olive Colobus, seems to be more rare.

The Critically Endangered Western Chimpanzee is relatively widespread throughout the Gola Rainforest. Based on transect sampling of nest counts in 2009, an average population density of 0.27 chimpanzees per km^2 was estimated (Ganas 2009), with highest densities occurring in the northern part of the protected area. These figures compare favourably to other West African forests. When extrapolated over the entire forest this density results in a total population of 303 chimpanzees in the Gola Rainforest (Ganas, 2009). More recent surveys indicate the chimpanzee population in Gola has remained largely stable.

The Endangered Pygmy Hippopotamus occurs in many areas, most notably along the Mano/Moro River. This area consists of a mix of floodplains dominated by herbaceous vegetation and patches of riverine forest. There is very little information on the ecology of this species, so it is difficult to make inferences about likely population sizes, but it seems probable that several tens of animals survive in the Gola Rainforest. Most of the riverine forest is in the leakage belt of the Gola Rainforest and so floodplain areas in the community forest may be essential for the conservation of this species in Sierra Leone (Hillers and Muana 2011).

A rapid assessment of small terrestrial mammals in Gola Rainforest identified 26 species of shrews and rodents (Anadu 2008). Three of these species, *Crocidura jouvenetae*, *C. obscurior* and *Malacomys cansdalei*, are Upper Guinea endemics. Two species, large-headed Forest Shrew *Crocidura grandiceps* and Buettikofer's Shrew *C. buettikoferi*, are restricted to the Gulf of Guinea and are classified as Near Threatened (Mondajem 2011).

The Gola Rainforest is also an important stronghold for bats - 34 species have been identified to date in the area, one of which is of conservation importance *Hipposideros marisae* - VU (Weber and Fahr 2009).

2.4.4.3 Reptiles and amphibians

Survey work by Hillers (2009) identified a total of 43 amphibian and 13 reptile species in the Gola Rainforest. Most of the frogs and reptiles recorded were typical forest species that are restricted to the Upper Guinea Forest zone. One third of the amphibians recorded are listed as globally threatened by IUCN (www.iucnredlist.org 2012) – see table 6. Most species are closely related to forest habitats (19 frog species, 44%; 9 reptile species, 69%). Additionally, 13 amphibians (30%) and

one reptile (8%) species are also associated with forests but are tolerant of farm bush habitats. The remaining 11 amphibians and three reptiles comprised of purely savanna, grassland, and farm bush species. None of these species is currently considered to be threatened, although IUCN classification is incomplete.

Genetic analyses identified two specimens of the genus *Phrynobatrachus* - a cryptic species new to science. This species is probably endemic to the area and therefore is likely to be threatened based on its small distribution range. The spectacular finding of the Critically Endangered Tai Toad *Amietophrynus taiensis* that was previously thought to be endemic to the Tai National Park in Côte d'Ivoire, further highlights the extremely high potential of the Gola Rainforest for conservation (Hillers 2009). More research is likely to uncover further surprises, including more species new to Sierra Leone or to science in general. Very high species richness, similar to the most diverse forests in south-western Côte d'Ivoire and south-eastern Guinea is not unlikely. The protected area is therefore crucial in protecting its important forest habitat diversity and for guaranteeing the persistence of the regional biodiversity of the Upper Guinean forests.

The two amphibians and two reptile species that are currently considered threatened are listed in table 6.

TABLE 6. GLOBALLY THREATENED AMPHIBIANS AND REPTILES RECORDED IN THE GOLA RAINFOREST

Species	Scientific name	IUCN status
Tai Toad	*Amietophrynus taiensis*	CR
Allen's Slippery Frog	*Conraua alleni*	VU
African Dwarf Crocodile	*Osteolaemus tetraspis*	VU
Slender-snouted Crocodile	*Mecistops cataphractus*	EN

Note – an additional 10 species are listed as Near Threatened

2.4.4.4 Freshwater fish

The rivers of the Gola Rainforest largely comprise the tributaries of the Moro, Mano, Mahoi and Moa Rivers within the Moro-Mano, Mahoi and Moa River basins. The waters of these basins are relatively demineralised, poorly buffered and hence vulnerable to change. Sampling in the Mahoi and Koye in March (Payne et al. 2009) recorded 31 fish species. With 35% of these species being regional endemics confined to the Sierra Leone/Liberia Upper Guinean ecoregion, the distinctiveness of the fish communities is remarkable. This further emphasises, in global terms, the distinctive nature of the Upper Guinean region of which the Gola Rainforest is part. Many of the fish species found are scarcely known to science and must be regarded as data deficient or unevaluated in IUCN conservation terms. Of particular note are the headwater swamps and streams which have distinctive communities of smaller species.

2.4.4.5 Invertebrates

Butterflies

The importance of the Gola Rainforest in the overall butterfly biodiversity of Sierra Leone can hardly be overestimated. Recent surveys have indicated that the Gola Rainforest holds an extremely high diversity of butterflies, probably well more than 600 species or 80% of all the 750-species known from Sierra Leone. A significant proportion of the rarest and most interesting species in Sierra Leone are almost restricted to the Gola Rainforest, the great majority of which are forest-dependent (Safian 2009) and two recently encountered butterflies are new to science (Safian 2011). Because of the

incomplete IUCN assessment of invertebrates, the conservation status of many of these species is not clear. An overview of noteworthy species is given by Larsen and Belcastro (2008) and Safian (2011). Four recent descriptions of species new to science are based, at least in part, on material collected in the Gola Rainforest.

Dragonflies

One hundred and forty species of dragonflies and damselflies (Odonata) are known to occur in the Gola Rainforest (Dijkstra 2011), representing 80% of the species found in all of Sierra Leone. Odonate species can be used as indicators of the quality of freshwater ecosystems and forest habitats (Catling 2005). This dependency can contribute to raising public awareness of the importance of conserving forests and aquatic habitats. Twenty-two species are considered regionally endemic or threatened, rare and insufficiently known (and thus potentially threatened) (Dijkstra 2011). *Agriocnemis angustirami* is listed as Vulnerable by IUCN. Six species found in the Gola Rainforest in 2011 are new to science.

2.5 Ecological processes and services

The Gola Rainforest provides several critical ecosystem services, most importantly carbon sequestration and watershed protection. In addition, the forest plays a role in erosion prevention, climate regulation and the supply of wild pollinators for growing coffee and other crops important for livelihoods.

2.5.1 Carbon sequestration

Carbon storage or sequestration is the process of capture and long-term storage of atmospheric carbon dioxide (CO_2). A variety of natural and engineered methods can be used for this but in relation to GRNP, the most important are regeneration of previously logged areas of forest and protection of existing forest. Regeneration of trees converts carbon from atmospheric CO_2 into biomass and protection of existing forest prevents the release of CO_2 into the atmosphere which occurs when forest is cleared and burnt.

Carbon stocks in the protected area comprise of above ground biomass, below ground biomass and soil carbon. To calculate carbon stocks in the GRNP, in 2006 trees were surveyed in 609 fixed area circular plots located throughout the entire protected area, the methodologies used comply with the VCS REDD modules methodologies (VM0007). Non-tree, litter and deadwood were excluded (Tatum-Hume et al 2013b). Above and below ground tree biomass and soil organic carbon was calculated separately for GRNP Central/North and GRNP South. Uncertainty was calculated as a percentage of the mean at 95% confidence intervals following the VCS methodology. The results are presented in table 7.

TABLE 7. PROTECTED AREA CARBON STOCKS - 2006 BASELINE

Carbon pool	GRNP Central/North				GRNP South			
	No. sample plots	Mean stock	95% CI tonnes CO_2/ha	95% CI as % of mean	No. sample plots	Mean stock	95% CI tonnes CO_2/ha	95% CI as % of mean
Above ground C	353	654.7	48.4	7.5	49	582.5	76.6	13.2
Below ground C		157.1	11.6	7.4		139.8	18.4	13.2

Soil C	18	253.9	30.6	12.1	29	192.3	24.4	12.7
Total C		**1065.7**	**31**	**5.5**		**914.6**	**49**	**9.0**

2.5.2 Watershed protection

Forests provide hydrological control of both water supply and water quality. In general, stream flow from forested catchments is more consistent through the year, less likely to run dry, peaks at lower levels and is cleaner than stream flow from areas where the forest has been cleared. Both reduced flow and dirtier water can contribute to health problems.

Most streams from the Gola Rainforest drain into the Moro/Mano River on the eastern border, the Mahoi, the Moa River on the western side or flow northwards to the Moa. Many settlements around the forest depend on streams that originate in the protected area, and local communities have commented on the importance of the forest for their water supplies (Witkowski et al. 2012a). Very few forest edge communities have piped or borehole supplies, and stream water is still used for a few domestic activities as well as being important for agriculture (Bulte et al. 2013).

2.5.3 Erosion prevention

Forest cover provides effective protection from erosion by rainfall and runoff (Morgan 2005, Bao and Laituri 2011). Soil loss, particularly on steep slopes, can be a leading cause of land degradation and can lead to danger from landslides in certain circumstances. The delivery of excess sediment downstream can be detrimental for aquatic ecosystems, for agriculture as well as problematic for domestic water supplies (Birkinshaw et al. 2010).

2.5.4 Wild pollinators

From studies elsewhere in Africa, wild pollinators have been shown to make a substantial economic contribution to coffee and other agricultural yields (Klein et al. 2003, Chaplin-Kramer et al. 2011). Therefore, it is likely that wild pollinators will play a similar significant role for a few crops grown in the Gola Rainforest.

2.5.5 Non-timber forest products (NTFPs)

Non-timber forest products such as honey, fruits, seeds, thatch, and rattan are collected from farm bush and forest areas (Leach 1994). Wild plant foods add variety to diets and are a supplement to food supplies during the hungry season (Leach 1994). They also serve as medicines, foods, construction, and binding materials, and are used to make household items such as mortars, utensils, and baskets. These can be used in the home or sold to generate income (Davies and Richards 1991).

2.5.6 Climate regulation

Any large block of forest is believed to play a role in stabilising climate and hydrology. Forests near the coast in West Africa are believed to be important in recycling moisture so as to maintain humidity levels and contribute to reliable rainfall in drier areas further inland, where water is often a limiting factor in terms of human survival.

3. SOCIO-ECONOMIC DESCRIPTION

3.1 National Context

Seventy-three percent of all poverty in Sierra Leone is found in rural areas (PRSP 2005) and two of the three districts where the project is based are recognised as the poorest districts in Sierra Leone (PSRP 2005). Life expectancy has increased from 47% in 2011 to 56.27 in 2023. and under-5 mortality is 100.3 out of every 1000 children. The adult literacy rate is estimated at 47% in 2010 (UNICEF, 2010) but is now 48.64 in 2021. (UNICEF 2021). Basic statistics are given in table 8.

TABLE 8. BASIC SOCIO-ECONOMIC STATISTICS FOR SIERRA LEONE

Socio-economic factor	Value	Comments
Population	8,141,000	From World Bank, 2022
Gross Domestic Product (GDP)	US $ 3,81 0m	2023
Human Development Index	0.477 (2011)	Ranked 181th out of 187 countries globally
Poverty rate	59.2%	From UNDP, 2022
Life expectancy	56.27 years	United Nations 2023
Under 5 mortality	100.8 in 1000	4th worst rate globally (UNICEF, 2003)
Adult literacy	48.64	World Bank (2021)
Global Hunger Index score	31.3	Ranked 116TH out of 125 countries globally (www.globalhungerindex)
Access to improved drinking water	57%	UNICEF(2017)
Access to improved sanitation	16%	Only 6% in rural areas (UNICEF, 2017)

In 2010/11, Sierra Leone had an alarming Global Hunger Index score of 25.2[6] and was ranked 71 out of 81 countries (IFPRI, 2011), it qualifies as a Low Food Deficit Country per FAO criteria As at 2023, Global Hunder Index is 31.3 ranked 116th out of 125 countries globally. 57% of the population uses improved drinking water sources (UNICEF 2017) and only 16 % use improved sanitation facilities (6% in rural areas) (UNICEF, 2017). The underlying causes of poverty are attributed to wide-ranging factors including the lack of availability of social services (health, education, safe water and sanitation); lack of agricultural inputs, market access and low incomes from the sale of produce; weak infrastructure (bad road networks, lack of storage facilities); lack of economic and employment opportunities; devastation by the 11 year civil war; and social barriers such as large family size within the rural communities (PSRP 2005).

3.2 Forest Edge Communities (FECs)

From baseline surveys and other consultation and information gathering exercises (Bulte et al. 2010, Tatum-Hume et al. 2013b), the findings of national surveys are a reflection of conditions in FECs. All FECs described themselves as poor and the clear majority lack basic amenities and services such as latrines, clean water supply, healthcare and education. The civil war had a devastating impact on infrastructure (houses in particular) that remains apparent to date. The majority of FECs are remote

[6] Designed to track global hunger, the index combines undernourishment, child mortality and children underweight.

and located some distance from motorable roads making market access difficult and restricting economic opportunity. For 90% of the population in FECs, subsistence agriculture forms the basis for their livelihoods (Bulte et al 2013).

3.2.1 Village size

The size of FECs varies from small hamlets of as few as 10 individuals to large towns of up to 1200 people. 75% of villages have a larger proportion of women than men because of the civil war on able-bodied men and greater male out-migration after the war (Bulte et al. 2013). Despite this, the majority of households have male heads (85%) due to the widespread practice of polygyny.[7] Despite the civil war, populations have grown by an average of 2% between 1990 and 2000 (Bulte et al 2013). The most recent figures for the population of the Leakage Belt estimated around 23,500 individuals (Bulte et al 2013), spread across 122 villages. It is estimated that over half the population is below the age of 18 (Bulte et al 2013).

The majority (86%) of people residing in FECs describe themselves as being 'Mende'; other ethnic groups are Fula, Mandingo, Vai, Kissi, Limba, Gbandi, Temne, and the eponymous Gola. There are no obvious ethnic tensions between these groups and none would be described as 'indigenous' with the exception of the Gola people. There are, however, only a handful of villages comprised of majority Gola and the Gola language is seldom spoken outside these areas. The primary religion found in the area is Islam (93.1% of people); the remaining inhabitants are largely Christian and religious groups in the region live in harmony. Within a village people are seen as either citizens (*tali*) or strangers (*hota*). Citizens belong to land owning families, such families can recognize a common founding ancestor and trace patrilineal descent (Bulte et al. 2013). Strangers are people that were not born in the Chiefdom; some may marry a citizen or be accepted as a community member by way of their profession.

3.2.2 Governance

Villages are led by a village chief, who is the traditional authority in a village. Chiefs can be men or women and are key to the regulation of daily activities and the resolution of disputes. Other villagers that hold a degree of power and influence include the village speaker, the elders, members of secret societies and religious authorities. Whilst the town chief is the key representative of a FEC, day to day life in a village is organised in households. A household can be defined as the 'production unit' that makes up a household farm which is used to feed the members of the household for the year. Usually the household activities are coordinated by a head, who is most often male (approximately 85% of households; Bulte et al. 2013). Villages are grouped into sections and then chiefdoms, governed by Section and Paramount Chiefs respectively. More detail on both local and traditional governance systems can be found in Witkowski et al. (2012c).

3.2.3 Wealth

All FECs suffer from severe poverty and face many constraints to development. The majority of communities are located far from a motorable road (up to 8 hours walk) making access to key services such as markets, health centres and schools very difficult. Few villages contain even the most basic amenities such as public toilets, radios, cement drying floors or electricity (Bulte et al. 2013). Most houses are made from local materials consisting of mud walls and a thatch roof. At the household level, it is likely that households with lower socio-economic status are stranger headed

[7] Polygyny is widely practised in Sierra Leone whereby a man is married concurrently to more than one woman.

households or female-headed households as they generally have less land and civic rights. When villagers were asked directly who was the poorest, they all considered themselves to be poor and only upon further probing identified people that could not provide for themselves – namely the elderly, disabled, single mothers and widows as being among the poorest (Witkowski et al 2012a).

3.2.4 Education

Across FECs literacy levels are low, with approximately 29% of the adult population (over 18 years of age) able to read and write, though this is unequal across the genders, with approximately 43% of males and only 13% of females being literate. Over half the FEC population has received no education at all (Bulte et al 2013). The majority of FECs do not have educational facilities within the village and so children either have to walk long distances to attend school or lodge with a relative in larger towns. The costs associated with attending school (books, uniforms, supplies, and lodging) also create a barrier to attendance.

The situation on Education and Educational facilities have changed tremendously based on the activities of the REDD+ Project implementation in the GRNP FECs and the Seven Chiefdoms of the Gola Landscape. There is an increase in the number of Primary and Secondary Schools. The Gola REDD+ Scholarship scheme has been expanded to Junio- Secondary and Senior-Secondary Schools. The University Education Scholarship was introduced in 2024.

3.2.5 Health

There is a lack of access to basic health services across FECs leading to high disease rates and mortality - malaria and dysentery are the primary causes of mortality amongst children (Bulte et al. 2013). Most villages lack public latrines and sanitation facilities, the majority of villages do not have access to a clean water supply and lack knowledge of good health practices. Even in the schools and health care facilities that do exist, there are frequently shortages of staff, equipment and supplies.

The implementation of REDD+ Project has changed the narrative in most of the communities. The number of Health Centres have increased and sanitation facilities have been provided in most FECs and some of the offsite communities as a result of the efforts of the Benefit Sharing Agreement and the Chiefdom Development Fund

3.2.5 Land use and livelihoods

Within the GRNP, the primary land use is nature conservation though local community members are allowed to collect NTFPs. Outside the GRNP's boundaries, agricultural production is the main activity and source of income for households (approximately 90% of households in FECs, Bulte et al. 2013). The main activity is rice cultivation, the majority of which is carried out in upland areas and approximately half of land holdings are dedicated to upland farms. Rice production in inland valley swamp areas and plantations (largely coffee and cocoa) each cover 25% of the remaining agricultural land.

Most villagers directly engage in rice farming, and on average 77% of households make a new farm each year; the average household upland farm size is approximately 1.2 ha (ranging from 0.2 to 6.0 ha)[8]. In upland areas, forest or "farm-bush" is cleared and farmed for one or two years. Rice is inter-cropped with yams, cassava, corn, beans and a variety of vegetables; these inter-crops are worth

[8] Sierra Leonean rice farmers estimate the size of upland rice farms in terms of the bushels of rice seed the area will require. One bu. is *c.* 25 kg of husk rice, and this amount of seed will plant approximately 0.4 ha.

approximately 25-50% of the total food value of the upland farm. Inter-crops in upland areas are largely the remit of women, as are the backyard gardens that supplement food supplies. Land is then left to fallow for an average period of 7 years but fallow periods vary depending on many factors from soil fertility to labour availability (Witkowski et al. 2012a).

The heavy work of clearing and planting the upland farm is, where possible, undertaken by the members of a rotational labour-sharing group (Richards 1986, Bulte et al. 2013). Agriculture groups are the most common form of community institution found in about 61% of FECs (Bulte et al. 2013). Once the upland farm is planted the work of weeding and scaring animals falls to the female members of the households. Labour constraints are a challenge in many of the FECs (Bulte et al. 2013).

On average, 70% of villager's farm swamps and average farm sizes are 0.8 ha (ranging 0.2 to 8.5 ha) (Bulte et al. 2013). Women, strangers and young men are the main cultivators of swamp rice, as male heads of households focus on the cultivation of tree crops from which they receive better returns. Swamp farms, especially when properly developed, tend to yield more rice, but are more labour intensive to develop, do not allow for the production of inter-crops and the variety of rice grown is less favoured for household consumption. The net return on swamp rice is thus probably comparable to that from upland cultivation (Bulte et al. 2013).

Many (male) household heads also invest in small plantations, typically producing coffee, cocoa, bananas, oil palm, pineapple and kola nuts. Women are less likely to develop plantations due as their typically lower levels of capital and land rights do not provide enough security to invest in such permanent crops (Bulte et al. 2013). Even so, some women do own plantation crops, often that they have inherited or been given by their spouses or parents. On average 86% of household heads cultivate a plantation. The average plantation size is 3.2 ha (ranging 0.2 to 114.1 ha) (Bulte et al. 2013). Plantations are still an important source of income, but production levels have declined over time as many areas have become overgrown for a variety of reasons including shortage of labour, the advancing age of some trees, use of poor varieties and techniques (Witkowski et al. 2012b, H-P Mueller pers.com).

Natural resources are the basis for the livelihood activities communities conduct to complement agricultural activities. Complementary activities for both subsistence use and cash generation include logging, mining, gathering, hunting, fishing and petty trade. Communities rely on numerous forest products in their everyday lives; this includes both timber and non-timber forest products such as honey, fruit, seeds, thatch and rattan (Leach, 1994). These natural resources are gathered primarily in bush-fallow areas and plantations but also in forests (Leach, 1994). High forests provide 57.9% of all medicinal plants used by villagers around Gola (Davies and Richards 1991) and these plants remain central to Mende medicinal practices despite the availability of Western medicine (Leach 1994). 'Bush' areas are also important for the creation and maintenance of local society's traditional structures particularly local governance and secret society (Leach 1994).

FECs report the majority if not all of their residents experience a 'hungry season' during the wet season sometime between May and October when there are shortages of rice, their staple food (Witkowski et al. 2012b). This typically occurs from July-September when the previous year's rice supplies have been exhausted (sold or eaten) and the current years are not yet ready to harvest. The actual length and severity of this period varies greatly depending on a variety of factors such as weather conditions, labour availability, crop damage, disposable income to buy rice etc (Witkowski et al. 2012b).

3.4 Land Ownership and Tenure

Since the designation of the area as Forest Reserves in the 1920s, the only rights retained by local communities are for access and the collection of NTFPs. The original legislation was revised in 1988 (Forestry Act), 1990 (Forest Regulations) and 1992 (Wildlife Act).

With the establishment of the National Park, the Government of Sierra Leone has the legal responsibility to manage the protected area, the seven Chiefdoms and landholding families that surround what is now the National Park are still recognised as the owners of the land, though they no longer have any control rights and use rights are limited by the national laws mentioned. The Management Plan of the GRNP supported the implementation of legal framework and traditional land rights. The REDD+ Programme provides for the long term sustainable financing platform for the protection of GRNPs biodiversity, support all elements of community participation and governance through the REDD+ Benefit Sharing Agreement and promote all efforts aimed at supporting sustainable management of resources in and around the National Park.

There are no communities living inside the protected area, with the exception of the earlier described Wagikoh enclave, but during the process of 'brushing' the park boundary to clearly define it on the ground a small number of disputed sections were identified. The Park Management has a conflict management procedure and a grievance register is open for all forms of dispute resolution on park management and the REDD+ project implementation

Land in the Leakage Belt is under a different form of tenure to the protected area. As in all provincial areas in Sierra Leone, land is governed primarily by customary law and is subject to family tenure under the Mende tribal system (Climate Focus 2011). Land is held by family lineages and administered by a family head whilst Paramount Chiefs and chiefdom councils retain the right to regulate the way in which land is used in their Chiefdoms. The family heads can trace their land rights in terms of patrilineal descent from those who first cleared the forest for farming. The local system is clear amongst local people; each family respects another's property rights and there are few disagreements as land boundaries are known and the knowledge is passed down through the generations (Bulte et al 2013). However, family tenure is not formally documented which can lead to problems if outsiders come to the area to make agreements to lease large areas of land for agriculture projects (Green Scenery, 2011). Many villages have bylaws but these most often relate to social norms such as abusive language, sexual misconduct and obeying elders rather than land use (Bulte et al. 2013).

Land conflicts are not widely reported (Bulte et al. 2013) but where they have occurred can involve encroachment when land is being brushed for farming, or a dispute over the timing of bush burning e.g. when the wind changes and carries fire into a neighbouring farm. Sometimes a villager may be fined for clearing land for farming and then not using it. Most conflicts are between co-villagers rather than inter-village disputes (Bulte et al. 2013). Where inter-village disputes arise, it is purported to be where farmers clear bush on either side of a poorly-marked inter-communal boundary. This is most likely where land has not been used for many years, and the local boundary markers have been neglected rather than because of pressures on land availability.

3.5 Stakeholders

To identify the stakeholders around the protected area that can potentially be affected by the Gola REDD project activities a stakeholder analysis profile matrix was completed. This was complemented by a rainbow stakeholder analysis which clarified not only which stakeholders can potentially be

affected by project activities, but also which stakeholders might affect project activities, as recommended by Reed et al (2009) (see figure 2). The aim of the rainbow analysis was to highlight the nature of each group's impact to and from the project so that plans can be included in the project design to mitigate negative impacts and pinpoint with whom the project must engage to ensure long term protection of the GRNP. Information was used from the stakeholder analysis profile matrix, the Gola Project Context Report (Witkowski et al 2012c), the threats Report (Witkowski 2012) as well as the perspectives of various stakeholders (NGO, government and community actors) to determine who and/or what has the ability to affect the success of the project. In addition, a rights holder analysis was carried out to identify all those stakeholders with rights to the land and resources in the protected area (See Gola Project Context Report; Witkowski et al 2012c). All of these analyses were validated through consultation (see table 9).

TABLE 9. STAKEHOLDER ANALYSIS, CARRIED OUT AT THE BEGINNING OF THE PROJECT DESIGN PROCESS (2012)

STAKEHOLDER ANALYSIS PROFILE MATRIX			
Stakeholder or stakeholder sub-group	**Interest in the project**	**Effect of project on their interests**	**Capacity/ Motivation to Participate**
GoSL - regional representatives	Political leaders of region where project is being implemented - This includes MPs (constituency level) and Permanent Secretary (regional level), and District Council and Councillors (district level)	Project will impact their constituencies and provide positive benefits for constituents.	Low
National and international development organizations (both non- and for profit)	Some are already working in the Gola area and may be engaged to help with livelihood activities designed as part of the REDD project. These organizations include CRS, PAGE, WHH, GOAL, and Tropical Forest Farms, among others	Positive - some of project's community development activities may be implemented by them	Medium
Regional traditional leaders	This includes Paramount Chiefs, Chiefdom speakers, Section chiefs and Town chiefs. The Paramount Chief is the highest traditional leader and head of chiefdom. There are 7 Chiefdoms around GRNP, and some of each Paramount Chief's villages are forest edge communities, others are offsite; buy in is critical.	Project will affect people in their constituency, which includes both the Leakage Belt and offsite communities	High
Traditional landowning families of the gola forest	Families recognized by customary law as the land owners of the Gola Forest before the existence of the Reserve or National Park. The head of the family receives annual payments under the benefit sharing agreement to compensate them for loss of use and royalty payments	Positive; the project will ensure that their traditional rights are recognized and provide direct financial benefits	Medium

Gola community development committees	Responsible for implementation of the Community Development Fund. One exists in each chiefdom - members are elected and include a teacher, farmer, women's leader, youth, hunter, logger, and forest edge community representative. There are also several permanent members, including representatives for the Paramount Chiefs, MPs, and District Councillors.	Project will provide the funds for the chiefdom development fund that all communities can apply to for support for development projects	High
Offsite communities	Communities within the 7 Chiefdoms around the Gola Rainforest; potential agents of deforestation within the leakage belt	Positive - these communities will receive benefits under the benefit sharing agreement in the form of the community development fund, scholarships etc.	Medium
Forest edge communities	Communities living closest around the edge of GRNP; most likely agents of deforestation	Project will affect them and the activities they can do in the GRNP, project will need to engage with these communities to develop project activities	High

The analysis showed that in order to mitigate the potential threats the project will need to engage with a broader range of stakeholders than just the affected rights holders and most impacted group to gain political support at both local and national levels. There is a need to address wider natural resource governance issues in the region and within the Government to ensure the long-term success and sustainability of the Gola Rainforest National Park.

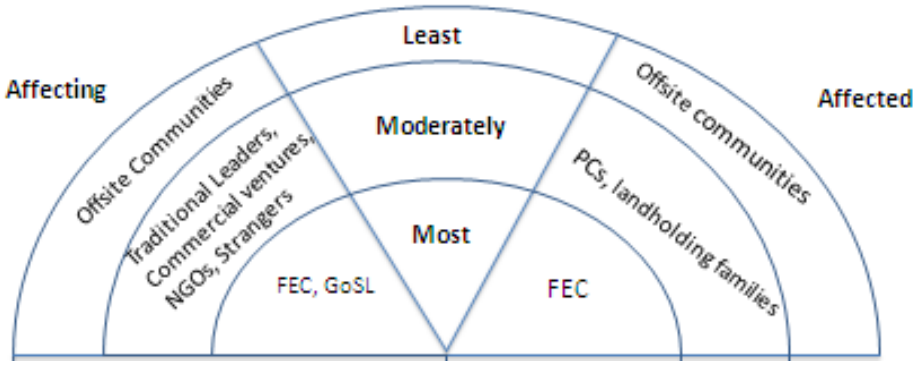

FIGURE 8. RAINBOW STAKEHOLDER DIAGRAM OF GOLA PROJECT STAKEHOLDERS WHO MAY AFFECT AND BE AFFECTED BY PROJECT ACTIVITIES

The primary group of legal, customary and ethical local rights-holders to engage with for the purposes of the development of the REDD project, as they can both affect it and be affected by it, are therefore the Gola Paramount Chiefs, the heirs of the original landowners of the GRNP and the Forest Edge Communities. A detailed description of both primary and secondary stakeholder engagement in the development of the Gola REDD project can be found in the CCB PD and Tatum-Hume et al 2013a.

The Management of the GRNP has continued to make use of these analysis and baseline reports as guidelines and principles for governance and management of natural resources.

3.6 Relevant National Laws, Statues and Other Regulatory Frameworks

3.6.1 National Forest Laws

The Forestry Division within the Ministry of Environment and Climate Change (MoECC) is responsible for the management of forest areas in Sierra Leone. The principal policies and laws relevant to the management of forest areas are the Wildlife Conservation Act of 1972, the Forestry Act of 1988 and the Forestry Act Regulations in 1990 and the recently passed National Protected Areas Authority Act 2013. As the Gola Rainforest National Park is a national protected area, it falls under the management authority of the National Protected Area Authority (NPAA).

The Wildlife Conservation Act of 1972 established significant provisions for the conservation of wildlife ranging from the constitution of strict nature reserves, game reserves, and national parks, to prohibition of hunting of animals generally except with licence and permit. It also contains enforcement and penalty provisions. The Wildlife Conservation Act of 1972 stipulates in Part 2 Section 5 the constitution of national parks. The purpose of a National Park in Sierra Leone is 'propagating conserving and managing wild animal life and wild vegetation, and protecting sites, landscapes or geological formations of scientific or aesthetic value for the benefit and enjoyment of the public'. The first goal of this plan is to implement effective protection measures of the National Park to ensure that the forest is conserved and that biodiversity is protected, thus demonstrating that the National Park is aligned with the Wildlife Conservation Act.

The Forestry Act of 1988 and its Regulations for 1990 established provisions for the administration and management of the Forest Reserves, Community forests and National Parks. It also established fees for licences and law enforcement provisions. The Gola REDD project has established a register of landowning families of the National Park and has entered into a benefit sharing agreement with the families and other local stakeholders to provide compensation for lost royalties and rights in the project area and is therefore aligned to the Forestry Act of 1988.

As a National Park, the objective is inter alia to conserve wildlife and vegetation, and activities such as farming, logging and mining are prohibited. All Management Plans will be reviewed by the National Protected Areas Authority (NPAA), to ensure proper alignment with National Forest Laws and other statues and regulations.

3.6.2 REDD Regulations

The Government currently does not have any guidelines or regulations in place for REDD projects. A legal analysis carried out by Climate Focus (Climate Focus 2011) which reviewed the legal regulations surrounding the implementation of carbon projects in the Gola area concluded that specific legislation was not required to develop a REDD project in the GRNP.

3.6.3 Environmental Protection Agency Act

This act established the Environmental Protection Agency (EPA) to 'provide for the effective protection of the Environment and for other related matters'.

Under the act, projects that make 'substantial changes in renewable resource use (e.g. conversion of land to agricultural production, forestry or to pasture land, rural development, timber production)' are required to carry out an Environmental Impact Assessment (EIA). As the Gola REDD project has not made any substantial changes to the renewable resources of the area, and will not have any negative impacts on renewable resources or the environment as a whole an EIA was not required.

3.6.4 National Protected Area Authority Act

The 2013 Proected Areas Authority Act provided for the establishment of a National Protected Area Authority (NPAA) and Conservation Trust Fund to 'promote biodiversity conservation, wildlife management, research, to provide the sale of ecosystem services in National Protected Areas and to provide for other related matters. GRC-LG will work closely with the NPAA to ensure that all activities are aligned with Government policy as the authority's main function will be to 'exercise oversight authority over National Parks and Protected Areas designated for conservation purposes' (part III, 12 (1)) and has responsibility to 'promote REDD projects in Sierra Leone' (part III, 12 (2)f), and evaluate and approve National Protected Areas annual operation plans and budgets (part III, 12 2 p(v)) amongst other objectives. It is written into the legal agreements between the Gola REDD project and the Government that the project will comply with all relevant legislation and will work with the MoECC and the NPAA to ensure that the project is aligned with Government strategy.

4. RESOURCES AND VALUES

The Gola Rainforest contains elements fulfilling the criteria of all six High Conservation Values (HCVs) – see www.hcvnetwork.org for more details. These include endemic and threatened species and habitats, ecosystem services and important socio-economic resources. Brief details are given below, classified according to CCB project standards.

4.1 Natural values

The Gola Rainforest is extremely important for the conservation of threatened Upper Guinea flora and fauna.

HVC 1: Areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia)

The Gola Rainforest constitutes the westernmost part of the Upper Guinea forest belt, which has been classified as one of the 34 most important biodiversity hotspots in the world (Myers et al. 2000). The importance of the area is also highlighted by WWF (WWF Western Guinean Lowland Forest Ecoregion) and BirdLife International (BirdLife Upper Guinea forests Endemic Bird Area and Gola Forest Important Bird and Biodiversity Area).

Species of particular importance are:

- The Endangered Pygmy Hippopotamus, Western Red Colobus, Jentink's Duiker and Gola Malimbe - all have their main Sierra Leone strongholds in the Gola Rainforest.
- The Critically Endangered Tai Toad *Amietophrynus taiensis* - only known from Gola and Taï National Park in Cote d'Ivoire and the frog *Phrynobatrachus nov. sp.* - the entire world population of which is thought to be restricted to the Gola Rainforest and neighbouring forest in Liberia.
- An additional thirteen species of bird, mammal, amphibian and reptile and sixteen species of plant and tree listed as Vulnerable also occur in the Gola Rainforest – see Tables 3 to 6.
- In addition to the threatened species, there are several non-threatened species that are restricted to primary forest and the Gola Rainforest is of major importance for these species in Sierra Leone. These include Black-collared Lovebird, Shelley's Eagle-Owl and Nimba Flycatcher.

It should be noted that the importance of the Gola Rainforest is not limited to threatened species. For many taxa the IUCN red lists are incomplete and the conservation status of many lesser-known taxa such as amphibians, fish and invertebrates has not been adequately assessed[9]. Many of these species may be threatened, especially in sensitive groups such as amphibians. In addition, several species new to science have been recently discovered in the Gola Rainforest e.g. the *Phrynobatrachus* frog, at least three species of butterfly and six species of dragonfly. There may be many species waiting for discovery in these forests and it is likely that many of these will be endemic to the region.

[9] see http://www.iucnredlist.org/initiatives/amphibians/description/limitations

HCV 2: Globally, regionally or nationally significant large landscape-level areas where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance

The Gola Rainforest is widely recognised as one of the best remaining fragments of the Upper Guinea forest type in West Africa, supporting many species of plants and animals that do not occur outside of the Upper Guinea forests. The populations of these species are of global significance as local extinction would be detrimental to the survival of entire species.

At the national level, the Gola Rainforest contains the largest remaining tract of tropical lowland forest in Sierra Leone.

HCV 3: Threatened or rare ecosystems

The Upper Guinea forests are distributed in West Africa from Guinea in the west to Togo in the east and are separated from the main Guinea-Congolian forests of central Africa by the unforested 'Dahomey Gap' in Togo and Benin – see map 7. They have been classified as one of the 34 most important biodiversity hotspots in the world (Myers et al. 2000) and have experienced severe loss of forest cover. Chatelain et al. (2004) estimate that only between 20% and 50% of the forest cover that existed at the beginning of the 19th century remains. In Liberia, forest cover was reduced by 22% in the period 1990 – 2005 (FAO Global Forest Resource Assessment, 2005). Given the climatic conditions, more than half of Sierra Leone could be covered with rainforest, but actual forest cover may be no more than 5%. The conservation of the Gola Rainforest is crucial for the survival of this highly threatened habitat and its associated species in Sierra Leone.

4.2 Socio-economic values

HCV 4: Areas that provide basic ecosystem services in critical situations (e.g. watershed protection, erosion control)

The Gola Rainforest provides several critical ecosystem services including carbon sequestration, watershed protection, erosion prevention, climate regulation and the supply of wild pollinators for commercial crops – see section 2.5 for more details.

HCV 5: Areas fundamental to meeting basic needs of local communities (e.g. subsistence, health)

The precise importance of the forest for FECs, defined as those who periodically enter the protected area primarily to farm, hunt and gather NTFPs, is difficult to determine as, since 2004 when forest guards began enforcing conservation legislation, farming and hunting within the park boundaries have been illegal. The available information suggests that the protected area serves more as an additional source for meeting some basic needs rather than being a fundamental source, though several species of medicinal plants found in High Forest areas remain central to Mende medicinal practices. The project is designed to ensure that FECs will be involved in the co-management of zones of the GRNP and are able to sustainably extract NTFPs and fish as they have done in the past.

HCV 6: Areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities)

Secret societies (Sande/Bundu and Poro) are a central part of the Mende culture, as a person is not fully gendered until they have reached puberty and passed through an initiation process. As part of the initiation process, children are required to spend time in a special part of the bush isolated from members of the opposite sex (Leach 1996); the locations of these areas are known only to members

of the societies, but they are understood to be largely within the bush areas of the leakage belt rather than in the protected area (Community Development staff pers comm.).

Burial grounds are considered sacred areas and there are strict rules about respecting such areas (Bulte et al 2013). Such sites have been encountered within the National Park during biodiversity survey work rather than as a result of a deliberate effort to identify such areas. Burial grounds are also present in the leakage belt.

In addition to the site's High Conservation Values, effective management of the forest and its associated wildlife has the potential for generating modest levels of income for local communities through the development of nature-based tourism.

4.3 Other values

4.3.1 Research and Knowledge Systems

The Gola Rainforest has been used for a wide range of biodiversity and socio-economic research purposes over the years. The richness and conservation importance of the area presents many opportunities for further research which would add significantly to the scientific baseline for West Africa and establish the GRNP as a centre for international research excellence.

4.3.2 Education and awareness-raising

Increased education and awareness raising efforts with the FECs, focusing on the importance of a healthy environment, its contributions to human well-being and the value of standing forests and natural resource management. The value of forests for human wellbeing, education and research, provision of ecosystem services and support to livelihoods and local economy through NTFPs and community forestry practices continued to play major role in management principles and which entail practical involvement of communities. Activities such as Sensitization meetings, roadshows and radio talks will continue to be used to sustain high level awareness and participation of citizens on forest-based living and economy.

4.3.3 Demonstration and advocacy

As the first REDD project to be developed in Sierra Leone, the innovative approach to planning, financing, and managing the Gola Rainforest being adopted by the GRNP has the potential to demonstrate that protecting forest resources can be both socially and environmentally beneficial.

Gola REDD+ has matured over the years to provide a knowledge development hub and a model for replication in other parts of the Guinea Forest Biome of West Africa. The first 10 Years of REDD+ in and around the GRNP has passed the development phase and moved towards the consolidation phase and it is becoming popular as a positive and viable example for long term financing of forest conservation and development in Sierra Leone and West Africa.

4.3.4 Employment and Empowerment (see GRNP staff handbook)

The GRNP has as policy to recruit staff on a competitive, open and transparent basis, with preference always being given to members of the local communities. Additionally, training and capacity development is an integral part of staff and National Protected Area Authority (NPAA) development to eventually manage the GRNP independently. Training opportunities are to be provided to the local communities, both in terms of improving livelihoods and development of skills to improve prospects in the limited and competitive job market.

4.4.4 Visitation and Tourism

This is small-scale at present, but the GRNP has a Tourism Officer whose role includes the development of community ecotourism activities to ensure consistent packages are offered to visitors and to promote the Gola Rainforest as an ecotourism destination at a national level. A key element of the role is to ensure that all funds generated from visitors are effectively distributed to the communities and Government.

Tourism and Visitor reception activities have been carried out since inception and has continued to be a major part of the efforts to promote nature-based income and socio-cultural activities in and around the National Park.

5. REGIONAL SETTING

5.1 Greater Gola Landscape

Sierra Leone's GRNP and the Lofa-Mano Forest in Liberia represent a significant continuous portion of the Upper Guinea Forest ecosystem. There is a real need to establish a strategy for cross border conservation, building capacity and implementing a trans-boundary protected area initiative (peace park) to protect the biodiversity and ecological values of these two important forests.

The impacts of conservation efforts and community outreach work will be more effective if conservation efforts in the GRNP are coordinated with and/or accompanied by similar efforts in the Lofa-Mano National Forest Reserve in Liberia. The proposed trans-boundary conservation area was classified as the highest priority conservation area in the Upper Guinea Forest conservation strategy published in 1999 by Conservation International. The potential boundaries of the trans-boundary park are shown on map 8.

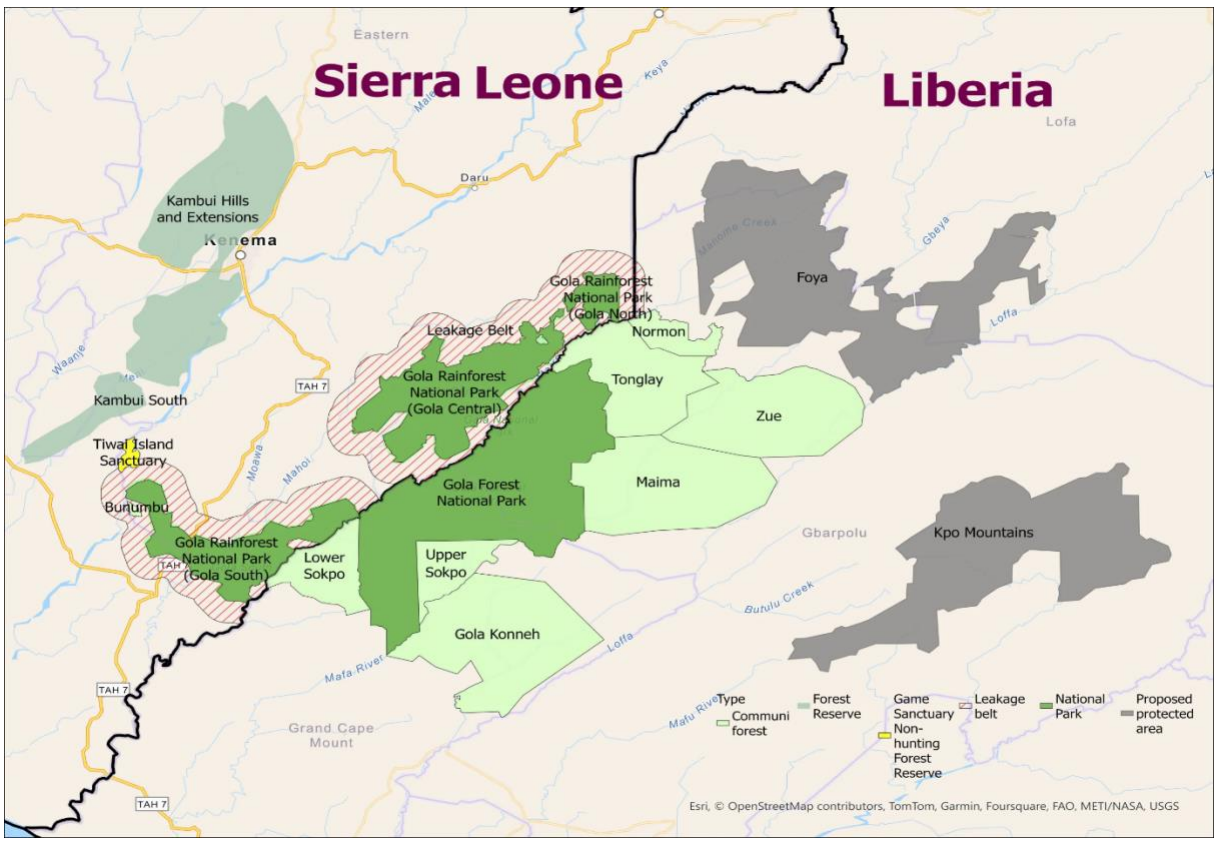

FIGURE 9. MAP OF THE GREATER GOLA LANDSCAPE OF LIBERIA AND SIERRA LEONE

PART TWO: THE PLAN

C. VISION AND PURPOSE

The **vision** of the Gola Rainforest National Park is to promote the ecosystem integrity of the Tropical Rainforest in Sierra Leone through the protection of forest resources, its watershed and its biodiversity and to harness its importance as a the local, national and global asset for nature conservation and development.

The Gola REDD Project is supportive to the establishment of the National Park and its long term financing as well as contributing to the National priorities for nature conservation, biodiversity protection and socio-economic development in Sierra through participatory action and for the benefits of the local communities in the Gola Chiefdoms of Eastern Sierra Leone.

D. THREATS AND ISSUES

1. Analysis of Issues and Threats

Biodiversity in the Gola Rainforest – species and habitats - is threatened by a number of activities that result in deforestation, degradation or disturbance of the forest or by hunting activities.

1.1 Deforestation and degradation

The primary driver of deforestation in the area is the conversion of forest to the bush-fallow cycle for subsistence agriculture. Deforestation in the Gola Rainforest would reduce the size of the forest blocks and increase their isolation from one another (in reference to the Winrock International's modelling/projection work). This would have a direct impact on plant biodiversity and an adverse impact on other taxa as many species are restricted to forest habitats and so are dependent on the availability of forest cover. Many threatened species have small ranges or are predominantly restricted to undisturbed primary forest e.g. the Endangered Western Red Colobus and Diana Monkey, and the Critically Endangered Tai Toad and so are highly vulnerable to deforestation (Davies 1987, Klop et al. 2010). Established meta-population theory e.g. Hanski 1999, Akcakaya et al. 2007 predicts that reducing connectivity between forest areas would have a long-term impact on the viability of isolated populations.

Degradation occurs as the result of selective logging and artisanal mining (Witkowski et al. 2012a). Mining activities further contribute to degradation by opening up the forest to other damaging activities through access roads and the possible use of toxic chemicals that can have a very negative impact on water quality and aquatic organisms (Witkowski et al. 2012a).

The protected area has deposits of several minerals that have high potential for exploitation including gold, diamonds and iron ore. Between 2005 and 2007, two mining licenses for diamond and iron ore prospecting were issued within the protected area (Global Witness 2010, Witkowski et al. 2012a). All of the previous mining licenses issued in the Gola Rainforest are shown on map 9. It is estimated that iron ore mining in the Bagra Hills area would be the most profitable enterprise. A study was carried out on small scale artisanal mining in 2013 in the leakage belt which provided a snap shot of the social dynamics involved; it also produced a series of recommendation to management. It should however be emphasized that large scale mining is not considered a current threat as the Legal Framework supporting the National Park itemize zero Mining as major component

of the Law. The endorsement of the REDD+ Project by the Government of Sierra Leone further reinforces the enforcement of zero mining in the National Park.

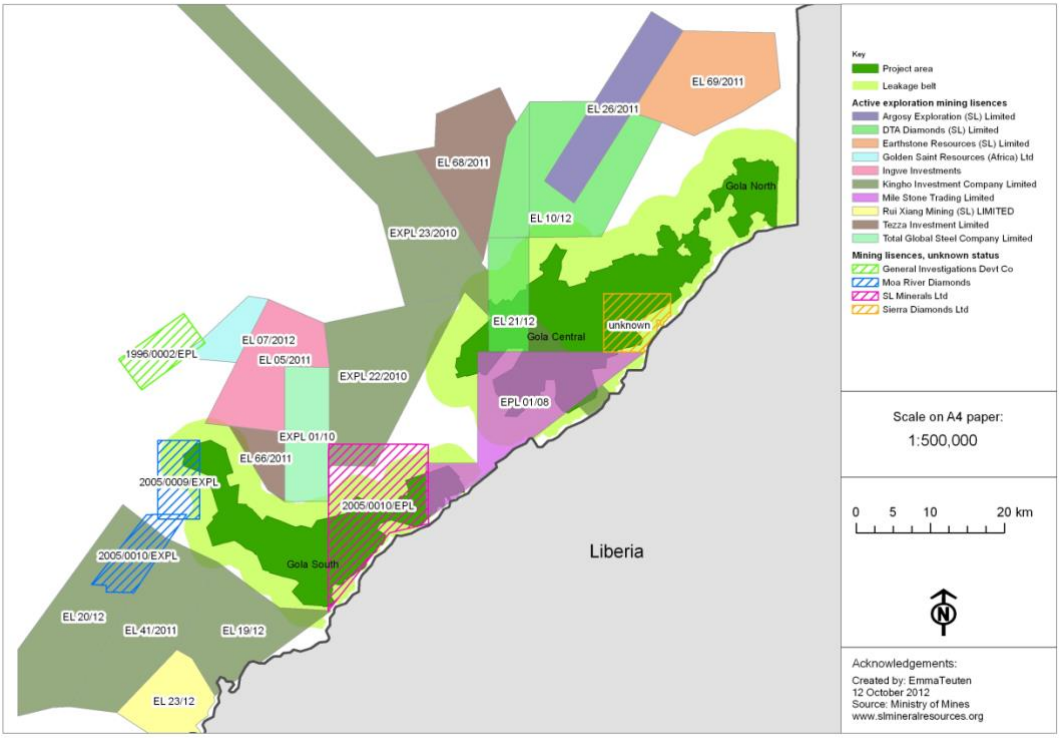

FIGURE 10. PREVIOUS MINING LICENCES ISSUED IN THE GOLA RAINFOREST. SOURCE: MINISTRY OF MINES WEBSITE; WWW.SLMINERALRESOURCES.ORG

1.2 Disturbance

Disturbance is defined here as increased human presence that may impact the behaviour of animals, leading to e.g. reduced population sizes or the abandonment of suitable sites. Disturbance represents a threat to biodiversity as many species are susceptible to even small levels of disturbance. For example, the Vulnerable White-necked Picathartes, a flagship species for the Gola Rainforest, nests in colonies on large boulders in forest areas. Surveys of nest colonies inside the protected area and in communal forests have indicated that colonies in the communal forests have a higher risk of abandonment because of human disturbance (Monticelli et al. 2011). Forest Elephants are also prone to the threat of disturbance; their numbers declined markedly during the civil war period when people used the forest as a refuge from war atrocities. Only a few individuals remain in the central parts of the protected area and any decline in the Gola Rainforest population brings the elimination of the Forest Elephant from Sierra Leone closer. It is known from only two other sites in the country, Outamba-Kilimi and Loma Mountains area, where populations were small even in the 1980s and are under heavy pressure from hunting (Blanc et al. 2007). The Endangered Pygmy Hippopotamus is also at high risk from disturbance. It is mostly found in floodplain areas in the buffer area community forest of the Gola Rainforest and is probably rare inside the forest in the protected area (Hillers and Muana 2011). Disturbance and habitat conversion threaten what is probably the largest remaining population of this species in Sierra Leone.

1.3 Bush meat hunting

In West and Central Africa, bushmeat hunting is known to be one of the most important threats to primate and duiker populations (Bowen-Jones et al. 1999, Kümpel et al. 2008, Greengrass 2011). Many of the primates and duikers in the Gola Rainforest are targeted by hunters. In a recent survey of bushmeat markets in Greater Gola, six species of high conservation concern were found including three Endangered species - Western Red Colobus, Western Chimpanzee and Pygmy Hippopotamus - and three Vulnerable species - Sooty Managabey, Diana Monkey and Black and White Colobus (Koroma 2012). Several bird species are also susceptible to hunting e.g. the Vulnerable White-breasted Guinea fowl which is sometimes caught in snares. Several species are also kept as pets e.g. Timneh Parrot.

The impact of the above threats on the site's HCVs is summarised in table 10.

TABLE 10. THREATS AND IMPACTS ON HIGH CONSERVATION VALUES AND POTENTIAL MANAGEMENT ACTIONS FOR GRNP

HVC	Species or habitat impacted	Threat	Management action	Management benefit
HVC 1	Primates and ungulates, especially Pygmy Hippopotamus, Western Red Colobus and Jentink's Duiker	Hunting Deforestation and/or forest degradation Disturbance	Patrols by GRNP Rangers. Community awareness raising activities. Land use mapping and planning. Community volunteer programme. Development of sustainable livelihood projects. Biomonitoring	Maintenance of forest cover. No reduction or possibly even an increase of populations of primary forest specialists and sensitive species e.g. forest elephant. Reduction in hunting threats (snares, number of poachers).
	White-breasted Guinea fowl	Hunting	Patrols by forest guards. Community awareness raising activities.	No reduction or possibly even an increase in numbers. Reduction in hunting threats (snares, number of poachers).
	White-necked Picathartes	Disturbance	Education and awareness raising. Patrols by forest guards. Land use mapping and planning. Monitoring of nest colonies	No reduction or possibly even an increase in numbers.
	Other threatened birds, especially Gola Malimbe	Deforestation and/or forest degradation	Patrols by forest guards. Land use mapping and planning.	Maintenance of forest cover. No reduction or possibly even an increase of populations of primary forest specialists

	Reptiles and amphibians, especially Tai Toad and *Phrynobatrachus* sp	Deforestation and/or forest degradation	Patrols by forest guards. Land use mapping and planning.	Maintenance of forest cover. No reduction or possibly even an increase of populations of primary forest specialists
HCV 2	Forested floodplains (habitat for Pygmy Hippopotamus)	Disturbance by fishermen Pollution of watercourses	Patrols by forest guards. Land use mapping and planning. Education and awareness raising activities.	No reduction or possibly even an increase of populations of forest floodplain species. Healthy riverine systems. Intact forest canopy and understory.
HCV 4	Intact forest for watershed protection, climate regulation and protection from erosion	Deforestation/Forest degradation	Patrols by forest guards Land use mapping and planning	Maintenance of forest cover. No reduction or possibly even an increase of populations of primary forest specialists
HCV 2 HCV 3 HCV 4	Primary rainforest	Deforestation and/or forest degradation	Patrols by forest guards.	Maintenance of forest cover. No reduction or possibly even an increase of populations of primary forest specialists
HCV 1 HCV 2 HCV 3 HCV 4	Loss of connectivity	Deforestation	Patrols by forest guards. Development of sustainable management plans with Forest Edge communities in key areas between protected areas and the Liberian border. Agriculture project to increase productivity in land that is already within the bush-fallow cycle.	Maintenance of forest cover. No reduction or possibly even an increase of populations of primary forest specialists. Connectivity between large forest patches and other areas of conservation interest across the border in Liberia allowing for transnational gene flow and the maintenance of viable populations in the face of climate change.

E. MANAGEMENT PROGRAMMES AND ACTIONS

All future work in the Gola Rainforest is directed towards achieving the four main programmes given in the Statement of Purpose at the start of this management plan. Achievement of the goals will be through the implementation of a series of 5 yearly management plans of which this is the first. Within each 5-year period, specific objectives and associated actions will be agreed between all stakeholders. The effectiveness of management plan implementation will be monitored on an ongoing basis, with major annual reviews. Based on the results of this monitoring, actions will be adapted and/or rescheduled in the light of actual progress and circumstances 'on the ground'. Through this adaptive management approach, the use of resources – staff, time, and financial – will be maximised.

Management Objectives

The proposed work for each goal during the period 2024 to 2028 is outlined below, together with 'lead' and 'supporting' individuals/organisations and proposed time scales for implementation. More detailed descriptions of the actions will be elaborated in Annual Operational Plans (AOPs).

In the tables, the following abbreviations have been used to indicate those responsible for the implementation of actions:

GRNP management team:

HoG – Head of Gola

CPM – Country Programme Manager

PO – Park Operations Team

CD – Community Development Team

CED – Conservation Enterprise Team

R&M- Research and Monitoring Team

FA – Finance Team

AD – Administration Team

HR – Human Resource Team

M&E – Monitoring and Evaluation Team

1. Park Protection Programme

Goal: To strengthen the protection strategy and effective management of the GRNP to maintain and enhance its full range of functioning ecological processes and enable the project to be a catalyst for building national policies and regulations for conservation and natural resource management as well as informing relevant regional and international platforms.

Objective 1.1 The integrity of the Gola Rainforest National Park, its habitats and key species, is maintained.

Rationale: National Park status on its own does not guarantee the long-term survival of key species and habitats and the integrity of carbon stocks; many species require active management or protection measures, and these must be based on sound information and enforcement of legislation through the control of illegal and damaging activities.

Activity 1.1.1 Conduct regular forest patrols to improve law enforcement presence in the National Park. Patrol types include normal Ranger Patrols, Joint Security Patrols and Transboundary Border Patrols

Activity 1.1.2 Establish and maintain a central patrol database to enable strategic patrol planning incorporating known data, information, and threat analysis to improve patrol coordination and coverage.

Activity 1.1.3 Provide comprehensive and on-going training and supervision of Park Rangers to improve the capacity of rangers to conduct effective patrols and collect data on illegal activities.

Activity 1.1.4 Maintain robust communication channels with forest edge communities and local authorities enable grievances to be efficiently and effectively addressed.

Activity 1.1.5 Maintain clear and permanent boundaries reducing the potential for boundary disputes and encroachment.

Activity 1.1.6 Rehabilitate artisanal mining sites and other degraded areas within the park to restore forest habitats.

Management Actions:

No	Actions	Lead	Partners	Timing	Priority
1.1.1.1	Regular patrols of GRNP by Rangers	PO	AIG (needs basis only)	Monthly	High
1.1.1.2	Joint Security Patrols	PO	SLAF SLPF	Quarterly	High
1.1.1.3	Joint Transboundary Patrols	PO	NPAA, FDA, MRU	Annually	High
1.1.2.1	SMART Patrol Database maintained	PO	RSPB	Monthly	High
1.1.2.2	Detailed GIS analysis of patrol routes and effort, with records of illegal activities and of key species	PO, R&M	RSPB	Monthly	High
1.1.3.1	Law Enforcement Training for Rangers	PO	RSPB South Africa Wildlife College	Once every 3 Years	High
1.1.4.1	Resolve boundary disputes	PO		Year 1-5	High

	with local communities				
1.1.4.2	Maintain active grievances register	HR		Year 1-5	High
1.1.5.1	Re-brushing park boundaries	PO		Annually	High
1.1.5.2	Permanently mark and maintain coundary pillars	PO		Year 1-2	High
1.1.6.1	Identify degraded sites within park boundaries and replant with native seedlings	PO		Year 1-5	Medium

Objective 1.2 Transboundary partnerships and collaboration between civil society, government, and communities enhance the protection of the Greater Gola Peace Park.

Rationale: This is part of a broader move away from viewing the GRNP and GFNP as distinct protected areas and towards a more holistic, landscape-scale approach. Increased coordination and collaboration with partners in Liberia will help to safeguard GRNP against transboundary threats.

Activity 1.2.1 Support the development of transboundary patrol protocols and conduct training for rangers on transboundary issues.

Activity 1.2.2 Facilitate ranger exchanges between GRNP and GFNP.

Activity 1.2.3 Participate in regular Gola Bilateral Committee and Transboundary Technical sub-committee meetings.

Activity 1.2.4 Promote awareness and education on the importance of transboundary collaboration and peace on the management of natural resources in the Greater Gola Landscape

Management Actions

No	Actions	Lead	Partners	Timing	Priority
1.2.1.1	Support the development of transboundary patrol protocols	HoG, CPM	NPAA, FDA, MRU	Year 1-3	High
1.2.1.2	Conduct joint training for rangers on transboundary issues	PO	NPAA, FDA	Year 2-5	Medium
1.2.2.1	Facilitate ranger exchanges and joint training between GRNP and GFNP	HoG, CPM	MoECC	Year 1-5	Medium
1.2.3.1	Participate in regular Gola Bilateral Committee Meetings	HoG, CPM	SCNL, CSSL, FDA, NPAA, MRU	Year 1-5	High
1.2.3.2	Participate in regular Transboundary Technical sub-committee meetings	HoG, CPM	SCNL, CSSL, FDA, NPAA, MRU	Year 1-5	High

Objective 1.3 GRNP is promoted as an example of best practice in rainforest management at national and international levels

Rationale: Promoting the project's best practices and developing institutional coherence amongst Government and Non-Government agencies will create a positive environment for natural resource governance and the demonstration of effective REDD activities is essential for the development and implementation of national mechanisms and effective protected area management elsewhere in the country.

Activity 1.3.1 Document and disseminate best management practices.

Activity 1.3.2 Advocate for the replication of the project to support wider conservation initiatives nationally and in the sub-region.

Activity 1.3.3 Establish and maintain strong links, dialogue and collaboration between the project and key local, provincial and national stakeholders

Activity 1.3.4 Establish the necessary legal framework for the implementation of co-management and other activities required by the project

Activity 1.3.5 Secure Word Heritage Site status.

Management Actions

No	Actions	Lead	Partners	Timing	Priority
1.3.1.1	Disseminate information from previous and ongoing programmes and projects	HoG, CPM	CSSL	Year 1-5	High
1.3.1.2	Provide expert advice where opportune or requested	HoG, CPM	RSPB	Year 1-5	Medium
1.3.3.1	Organise site visits by decision makers and representatives to illustrate successful management	HoG, CPM	MoECC	Annually	Low
1.3.4.1	Review existing wildlife and related legislation and identify issues	HoG, CPM	RSPB	Year 2-3	High
1.3.4.2	Establish a task team to develop recommendations for co-management	HoG, CPM	RSPB	Year 3-4	Medium
1.3.4.3	Advocate for the adoption of new/amended legislation	HoG, CPM	CSSL	Year 3-5	Medium
1.3.5.1	Conclude World Heritage Nomination process	HoG, CPM	TIWS	Year 1	High

2. Community Partnership and Sustainable Development Programme

Goal: To create an enabling environment for neighbouring communities to act as committed environmental stewards of the natural resource base that underpins their livelihoods through activities that enhance, generate value from and materialise the benefits derived from the Gola Rainforest's forests and sustainable land use practices.

Objective 2.1 Agriculture and farming practices in the project zone communities are well managed to boost productivity, improve fallow and nutrient recycling systems, and promote sustainable intensification

Rationale: Improving the productivity on land that is already part of the traditional bush-fallow cycle will reduce deforestation and benefit household food security and income. This is part of the project strategy to achieve a net positive impact for Gola Rainforest communities.

Activity 2.1.1 Assess current land use systems and design intervention strategies that are inclusive of the most vulnerable (wealth ranking) in a participatory manner.

Activity 2.1.2 Research human-wildlife conflict and pilot awareness mechanisms and mitigation measures to reduce impact.

Activity 2.1.3 Develop training modules for farmer field schools and provide inputs to establish and maintain farmers capacity for best practices in sustainable agriculture.

Activity 2.1.4 Pilot innovative agroforestry systems in the landscape to develop locally appropriate models which maximise livelihood, biodiversity, and carbon benefits.

Management Actions

No	Actions	Lead	Partners	Timing	Priority
2.1.1.1	Develop framework and criteria to ensure participation of vulnerable groups in programme activities.	CD, CED, M&E		Year 1	High
2.1.2.1	Collect and analyse data on human-wildlife conflicts	CD, R&M, M&E		Year 1-5	High
2.1.2.2	Provide training and advice on wildlife damage reduction techniques	CD		Year 2-5	Medium
2.1.3.1	Source knowledge & best practice in improved agricultural practices.	CD		Year 1-5	High
2.1.3.2	Master the Farmer Field School approach to demonstrate and disseminate best practices.	CD			Medium
2.1.4.1	Pilot mixed agroforestry systems. Develop best practices fit for local context.	CD, CED	JOA	Year 1-5	High

Objective 2.2 Connectivity between forest blocks is maintained through improved land use planning and community forest management.

Rationale: Effective Community Based Natural Resource Management (CBNRM) will mitigate leakage from the Gola Rainforest and preserve habitat connectivity between the forest blocks and forests in Liberia thus contributing to both climate and biodiversity objectives. From a community perspective land use planning will ensure that natural resources which underpin many livelihood activities are available in perpetuity.

Activity 2.2.1 Capacity building and awareness raising of the importance of NRM in villages in the Gola Rainforest.

Activity 2.2.2 Identification and prioritisation of clusters of FECs for participatory land use mapping and co-management.

Activity 2.2.3 Review and update in a participatory manner existing by-laws on traditional land use practices.

Activity 2.2.4 Promote the strengthening of traditional governance systems to enable communities to participate more effectively in the protection and management of the GRNP and enforcement of its laws and regulations.

Activity 2.2.5 Establish an enabling framework for co-management areas and zones inside the protected area (GRNP) including accessibility plans and specific resource use agreements.

Activity 2.2.6 Support communities to identify viable forest ecosystem services and products and develop mechanism to enable community forest use and land use zones.

Management Actions

No	Actions	Lead	Partners	Timing	Priority
2.2.1.1	Hold regular meetings with local communities and Forest Management Committees	CD		Year 1-5	Medium
2.2.2.1	Identify and categorise priority areas for conservation in community forests around National Park.	CD	CSSL, RSPB	Year 1-5	High
2.2.2.2	Develop land use plans in participation with forest edge communities in priority areas for conservation.	CD	CSSL, RSPB	Year 1-5	High
2.2.3.1	Document existing bylaws on traditional land-use practices in FECs and offsite communities	CD	CSSL	Year 1-5	Medium
2.2.4.1	Establish and support resource use groups to develop democratic	CD, CPM	CSSL	Year 1-5	Medium

	processes for NRM and participation in decision making.				
2.2.5.1	Review existing laws and policies in relation to community use zones (CUZs) and NTFP utilisation in the National Park.	HoG, CPM	CSSL, NPAA	Year 1-2	Medium
2.2.6.1	Develop a mechanism for co-management and resource use plans for access, utilisation and management of selected natural resources from identified management zones within GRNP.	CD, CPM		Year 3-5	Medium

Objective 2.3 Forest edge communities are supported to achieve greater financial independence and develop diversified income streams with an emphasis on nature-based and forest-friendly enterprise.

Rationale: Income generation schemes that diversify and increase the financial and non-financial benefits available from forest resources will place a shared value on standing forests and provide an alternative to unsustainable resource use thus reducing deforestation in the leakage belt whilst providing net positive benefits to communities. Coupled with improved financial literacy and management systems through savings and lending schemes, this will support the development of small and medium enterprise in forest edge communities.

Activity 2.3.1 Assess existing agricultural commodity value chains and identify gaps for agricultural products, NTFPs and SFPs and constraints for FECs.

Activity 2.3.2 Identify, support and provide inputs for production/collection, post-harvest processing and marketing needs based on gap analyses.

Activity 2.3.3 Increase the organisation and capacity of small holders cooperatives to enable increased trade and income from commodities.

Activity 2.3.4 Support the establishment and maintenance of village savings and lending schemes, including an assessment of the feasibility of targeting it towards women, using Saving and Internal Lending Communities (SILC) methods.

Activity 2.3.5 Develop and implement an eco-tourism strategy that promotes GRNP as a high-value destination for visitors that benefits and involves local communities.

Management Actions

No	Actions	Lead	Partners	Timing	Priority
2.3.1.1	Conduct localised surveys of NTFP use and perceptions on shortages or abundance	CD, CED		Year 2-5	High

2.3.1.2	Develop and implement practical monitoring of NTFP use within CFs	CD, M&E		Year 3-5	Medium
2.3.1.3	Conduct assessment on markets and value chain systems for agricultural products, NTFPs and SFPs.	CED		Year 1-2	High
2.3.2.1	Develop cocoa certification and commercialisation strategy	CED		Year 1-2	High
2.3.2.2	Apply for and achieve organic certification for Gola cocoa	CED		Year 1-2	High
2.3.2.3	Re-introduce and promote training on bee farming with target on promoting honey production as alternative source of income for community members.	CED		Year 2-5	Medium
2.3.3.1	Training and direct engagement on process management and essential registration to enable Gola Farmers access to global market	CED		Year 1-5	Medium
2.3.4.1	Monitor established village savings and loans (VSLA) groups and collate results from end of cycle evaluations	CD		Year 1-2	High
2.3.4.2	Extend the network of VSLA groups through trained Private Service Providers (PSPs) from successful groups	CD		Year 2-5	Medium
2.3.5.1	Develop ecotourism strategy targeting human resources, infrastructure development, product branding, market linkages and partnership with relevant stakeholders.	CED, CPM		Year 2	High
2.3.5.2	Implement GRNP ecotourism strategy	CED		Year 2-5	High

Objective 2.4 Awareness and understanding about the National Park and ecosystem values are enhanced at the local and national level.

Rationale: Promoting understanding and knowledge of the values of the GRNP and forests is a necessary pre-requisite for enabling the emergence of environmental stewardship in local communities.

Activity 2.4.1 Develop and implement an environmental education strategy with materials and modules dedicated to targeted topics and audiences.

Activity 2.4.2 Maintain a network of school nature clubs and support field visits to the National Park for local communities.

Activity 2.4.3 Assess pupil access and participation in secondary schools. Develop criteria for scholarship selection and provide scholarship packages to community selected students.

Activity 2.4.4 Assess, and implement where possible, other strategies for providing educational support to remote FECs which fall outside the current school coverage.

Activity 2.4.5 Develop and implement a GRNP conservation volunteer programme in FECs for unemployed youth.

Activity 2.4.6 Conduct annual awareness raising and educational road shows and other conservation awareness events to reach remote FECs.

Activity 2.4.7 Improve media visibility and public outreach of GRNP through symposium, open public lectures, roundtables and presentations at regional and international conferences and workshops.

Management Actions

No	Actions	Lead	Partners	Timing	Priority
2.4.1.1	Develop and implement an environmental education strategy with associated materials and modules dedicated to targeted topics and audiences.	CD	CSSL	Year 1-2	High
2.4.2.1	Organise training workshops for teachers and other role models to lead nature clubs	CD	CSSL	Year 1-5	Medium
2.4.2.2	Conduct fieldtrips to GRNP with local school children	CD	CSSL	Year 1-5	High
2.4.3.1	Assess pupil access and participation in secondary schools	CD		Year 1-2	High
2.4.3.2	Assess progression of pupils receiving education support from GRC-lG	CD		Year 1-2	High
2.4.3.3	Introduce scholarship scheme to support university students from the Landscape	CD		Year 1-5	High
2.4.4.1	Assess other strategies for providing educational support to remote FECs which fall outside the current school coverage	CD		Year 1-2	High
2.4.5.1	Extend network of Species Champions for Pygmy Hippos and Picathartes to promote species conservation	R&M		Year 1-5	Medium

2.4.5.2	Explore potential for additional Species Champion programmes to support other HCV species e.g. Timneh Parrot	R&M		Year 3-5	Medium
2.4.6.1	Conduct regular Environmental Roadshows at section and chiefdom levels	CD	CSSL	Year 1-5	High
2.4.6.2	Hold promotional events e.g. World Wildlife Day, World Environment Day	CD	CSSL	Year 1-5	Medium
2.4.6.3	Organise School debates, art and essay competition on conservation	CD	CSSL	Year 2-5	Low
2.4.6.4	Hold regular radio programmes on nature and conservation talks	CD		Year 1-5	Medium
2.4.7.1	Give presentations to Senior Schools and higher institutions	CD, R&M		Year 1-5	Medium
2.4.7.2	Improve visibility through presentations at regional and international conferences and workshops	HoG, CPM		Year 2-5	Medium

Objective 2.5 Communities in the Leakage Belt and Offsite zone around the GRNP are provided with equitably shared incentives for community infrastructure and human development.

Rationale: The development and maintenance of an agreement and mechanisms that reward and incentivise stakeholders to reduce deforestation and compensate others for foregone rights in an equitable, effective and transparent manner is essential to prevent elite capture and to foster support for the project.

Activity 2.5.1 Implement the distribution of funds and activities outlined in the Benefit Sharing Agreement (BSA).

Activity 2.5.2 Develop structures and monitoring procedures to ensure effective and transparent distribution of funds and in-kind benefits.

Activity 2.5.3 Assess development needs of FECs especially in relation to health, water, sanitation, access and generate list of target villages.

Activity 2.5.4 Support Gola Community Development Committees (GCDCs) in developing procedures and criteria to select development projects for funding.

Activity 2.5.5 Support the Government in updating the GRNP landowner register.

Management Actions

No	Actions	Lead	Partners	Timing	Priority
2.5.1.1	Implement the distribution of funds and activities outlined in the Benefit Sharing Agreement (BSA)	CD, FA		Year 1-5	High
2.5.1.2	Review BSA at regular intervals	HoG, CPM	GRC-LG	Year 2	High

	in consultation with relevant stakeholders		Directors		
2.5.1.3	Create and maintain effective feedback mechanism for communities on their roles and benefits sharing opportunities as supported by the BSA	CD, HoG		Year 2-5	High
2.5.2.1	Implement monitoring mechanisms to evaluate the Effectiveness and transparency of development initiatives	M&E		Year 1-5	High
2.5.3.1	Develop framework for Chiefdom and village profiling to establish development needs	CD, M&E		Year 2-5	High
2.5.4.1	Oversee the fair election of GCDCs	CD		Year 1-5	High
2.5.4.2	Provide advice and capacity building to GCDCs to develop robust procedures for the selection and implementation of development projects	CD		Year 1-5	High
2.5.5.1	Support the Government in updating the GRNP landowner register	CD, M&E, HoG		Year 1-5	High

3. Research and Monitoring Programme

Goal: To develop and maintain a comprehensive social and biodiversity database and associated monitoring system to ensure the availability of accurate, relevant and timely information to inform and enhance project management and the effective delivery of outcomes.

Objective 3.1 Programme progress and impacts on biodiversity are effectively evaluated through regular monitoring of key species, habitats and ecological processes.

Rationale: Monitoring of agreed, measurable outputs, using standardised methodologies, will ensure that the implemented management actions are delivering the predicted and desired changes and enables the project to adapt its management strategy accordingly. Periodic research activities and surveys are organised based on specific taxa and spatial research needs. The REDD+ programme will provide consistent assessment of the climate related data collection, monitoring of biodiversity index including species and land use systems.

Activity 3.1.1 Carry out regular monitoring of pre-identified and agreed sets of indicators for climate change, forest cover, biodiversity, and community variables.

Activity 3.1.2 Carry out regular analysis and report on available data.

Activity 3.1.3 Disseminate reports and results of monitoring to stakeholders and the scientific community.

Management Actions

No	Actions	Responsible	Partners	Timing	Priority
3.1.1.1	Complete primate transect surveys	R&M	RSPB	Year 1	High
3.1.1.2	Complete carbon stock enhancement surveys	R&M	RSPB	Year 1	High
3.1.1.3	Complete degradation surveys	R&M	RSPB	Year 1-2 & Year 3-4	High
3.1.1.4	Complete camera trap surveys for large mammals	R&M	RSPB	Year 1 & Year 4	High
3.1.1.5	Complete chimpanzee nest survey	R&M	RSPB	Year 2	High
3.1.1.6	Complete Picathartes colony survey	R&M	RSPB	Year 2	High
3.1.1.7	Complete Pygmy Hippo survey	R&M	RSPB	Year 2-3	High
3.1.1.8	Complete Bird Point Count survey	R&M	RSPB	Year 3-4	Medium
3.1.2.1	Complete End of Survey reports for all completed surveys	R&M	RSPB	Year 1-5	Medium
3.1.2.2	Analyse data from completed surveys and report against agreed indicators	R&M, RSPB TAs	RSPB ConSci	Year 1-5	High

3.1.3.1	Translate results into key messages to local stakeholders	R&M	RSPB	Year 1-5	Medium
3.1.3.2	Publish results in peer-reviewed journals	RSPB	RSPB ConSci	Year 3-5	Medium

Objective 3.2 Robust data and information support an adaptive approach to protected area management

Rationale: The planning and implementation of management and protection measures needs to be based on robust scientific information. To be of maximum value to inform management decisions, information collected by the project needs to be accurate, stored securely, readily accessible to project staff and updated on a regular basis.

Activity 3.2.1 Maintain a secure database to capture and store all data collected.

Activity 3.2.2 Conduct thorough checks on current and historical data to ensure accuracy and reliability.

Activity 3.2.3 Train all research and monitoring staff on data management and online database tools.

Management Actions

No	Actions	Responsible	Partners	Timing	Priority
3.2.1.1	Establish secure online database for all Gola data	RSPB	RSPB CDMU	Year 1	High
3.2.1.2	Update database with new survey data	R&M	RSPB	Year 1-5	High
3.2.2.1	Check and clean datasets	R&M	RSPB	Year 1-5	High
3.2.3.1	Train all research staff on data management and processing	RSPB TAs		Year 1-5	High
3.2.3.2	Train all research staff on online databases and data management tools	R&M	RSPB	Year 2-5	High

Objective 3.3 Critical gaps in information on biodiversity, ecological processes and socioeconomics are identified and addressed.

Rationale: Knowledge gaps hinder effective conservation action to address the drivers of changes which impact on biodiversity. Advances in technologies, tools, and understandings can help to improve monitoring and lead to improvements in interventions and thus conservation outcomes.

Activity 3.3.1 Review current biomonitoring plan and identify information and knowledge gaps.

Activity 3.3.2 Pilot emerging biomonitoring technologies to evaluate their potential applications and complementarity.

Activity 3.3.3 Develop and implement conservation action plans for key priority species.

Activity 3.3.4 Carry out socio-economic research to understand community dynamics and gather baseline information to guide community activities.

Management Actions

No	Actions	Responsible	Partners	Timing	Priority
3.3.1.1	Complete Gola Biomonitoring Review	RSPB	RSPB ConSci	Year 1	High
3.3.1.2	Priority research areas identified	RSPB	RSPB ConSci	Year 2-5	High
3.3.2.1	Pilot eDNA sampling as innovative monitoring method	R&M	RSPB	Year 1-2	Low
3.3.2.2	Pilot bioacoustics monitoring methodology	R&M	RSPB	Year 1-2	Low
3.3.2.3	Pilot use of SMART and other digital data collection tools	R&M	RSPB	Year 1-2	Medium
3.3.3.1	Develop species action plan for pygmy hippo	RSPB	RSPB ConSci	Year 1	High
3.3.3.2	Develop species action plan for white-necked picathartes	RSPB	RSPB ConSci	Year 1	High
3.3.3.3	Develop species action plan for Timneh Parrot	RSPB	RSPB ConSci	Year 1	High
3.3.4.1	Develop comprehensive socioeconomic research and monitoring plan	M&E	RSPB	Year 2-3	High
3.3.4.2	Implement socioeconomic monitoring plan	M&E	RSPB	Year 3-5	High
3.3.5.1	Identify potential national and international research partners to address knowledge gaps	HoG, R&M	RSPB	Year 1-3	Medium

Objective 3.4 GRNP is promoted as a centre for national and international research on tropical rainforest ecosystems.

Rationale: Promotion of the innovative approaches being taken towards sustainable, participatory management and the diverse opportunities for biodiversity and socio-economic research will secure and enhance the recognition of GRNP's High Conservation Values, fill gaps in scientific knowledge and understanding, as well as building the capacity and reputation for national research thus demonstrating the value and benefits of the forests in the Gola Rainforest nationally and internationally.

Activity 3.4.1 Establish the required infrastructure for national and international research to be carried out in the Gola Rainforest.

Activity 3.4.2 Identify and establish collaborative partnerships on agreed research topics.

Activity 3.4.3 Facilitate independent research projects within the Gola Rainforest aligned with priority research areas.

Activity 3.4.4 Promote and advocate the results of research.

Management Actions

No	Actions	Responsible	Partners	Timing	Priority
3.4.1.1	Complete review of external researcher process	R&M	RSPB, ETU, Njala	Year 1-2	High
3.4.1.2	Establish Research Centres at GRNP substations.	R&M, HoG	RSPB	Year 2-3	Medium
3.4.2.1	Identify potential national and international research partners to address knowledge gaps	HoG, R&M	RSPB	Year 1-3	Medium
3.4.2.2	Establish working relationships and MoUs with research partners	HoG, R&M	RSPB	Year 2-3	Medium
3.4.3.1	Facilitate independent research projects aligned with priority areas	R&M	RSPB, ETU, Njala	Year 2-5	Medium
3.4.4.1	Present results of independent research to local stakeholders	R&M	RSPB, ETU, Njala	Year 2-5	High

4. Operational Effectiveness Programme

Goal: To enable effective management through the implementation of best practice administrative and financial systems and the provision of necessary staff training, resourcing, and equipment.

Objective 4.1. Staff welfare and performance are measurably improved.

Rationale: The future desired state for the GRNP is one where staff morale is high, and staff are effective and efficient in performance of their duties. There are currently challenges that hinder the realisation of this desired state. For instance, some departments and units are operating below necessary capacity, and park facilities are inadequate.

Activity 4.1.1 Review and revise operational policies and organisational staff handbook.

Activity 4.1.2 Provide a secure work environment for staff and visitors.

Activity 4.1.3 Promote a culture of teamwork, respect, and excellence.

Activity 4.1.4 Ensure that recruitment follows HR policy of equal opportunities and best practice.

Activity 4.1.5 Based on a needs assessment and training and development plans ensure the efficiency and job satisfaction of staff.

Activity 4.1.6 Upgrade, maintain and, where necessary, establish infrastructure such as forest guard stations, road access and park headquarters.

Management Actions

No	Actions	Responsible	Partners Involved	Timing	Priority
4.1.1.1	Review and update GRC Staff Handbook to align with current realities and national policies	HR		Year 1	High
4.1.1.2	Review and update organisational policies	HR		Every 2 years	High
4.1.5.1	Conduct organisational capacity assessment	HR	RSPB	Year 1	High
4.1.5.2	Develop training and development plans to address capacity shortfalls	HR	RSPB	Year 2	Medium

Objective 4.2 Management infrastructure is enhanced to ensure effective and transparent management.

Rationale: Effective project management must have all the mechanisms in place to assist and guide staff in carrying out their work and enable them to demonstrate that resources are being used in a cost-effective legal and transparent manner.

Activity 4.2.1 Implement organisational re-structuring plan to achieve target operating model.

Activity 4.2.2 Maintain robust procurement and accounting policies and procedures.

Activity 4.2.3 Improve Financial transparency and traceability through enhanced financial planning and reporting tools

Activity 4.2.4 Establish an internal budgetary review committee to guide the development of annual and quarterly budgets.

Activity 4.2.5 Develop, implement, evaluate and report on annual operational plans.

Management Actions:

No	Actions	Responsible	Partners Involved	Timing	Priority
4.2.1.1	Implement organisational re-structuring plan	HoG, CPM, HR	GRC-LG Directors	Year 1	High
4.2.2.1	Develop and implement a competitive, transparent procurement procedure which fulfils government and REDD+ project requirements	AD	n/a	Year 1-5	High
4.2.3.1	Establish and maintain proper accounting policies and procedures to ensure the correct and efficient use of funds	FA	RSPB	Year 1-5	High
4.2.4.1	Establish internal budgetary review committee to guide budget development and ensure adherence.	FA	RSPB	Year 2	Medium
4.2.4.2	Develop robust annual operating budgets	FA, HoG, CPM	Senior Managers, RSPB Technical Advisors	Year 1-5	High
4.2.4.3	Approval of annual operating budgets	GRC-LG Directors		Year 1-5	High
4.2.5.1	Develop annual operational plans (AOPs)	HoG, CPM	Senior Managers, RSPB Technical Advisors	Year 1-5	High
4.2.5.2	Approval of Annual Operations Plan	GRC-LG Directors		Year 1-5	High

Objective 4.3 Protected area management programmes are delivered more effectively and efficiently.

Rationale: There is a lack of capacity in some key areas that is impacting on the ability of GRC to deliver its programme of work in a timely, effective, and impactful way. Addressing these challenges from an organisational point of view will increase the possibility of developing a driven culture of improvement within the team that will have wider implications across the organisation. It will also help ensure that there is a focus not just on measuring outputs as is the case operationally day to day within the organisation but also on outcomes and impact.

Activity 4.3.1 Establish an Operational Effectiveness Team

Activity 4.3.2 Monitor the effectiveness of programme delivery and identify efficiencies in resourcing – staff, time, financial – to improve cost effectiveness.

Activity 4.3.3 Liaise with relevant departmental heads to streamline programme delivery.

Activity 4.3.4 Improve internal communications and intra-organisational collaboration

Management Actions:

No	Actions	Responsible	Partners Involved	Timing	Priority
4.3.1.1	Establish Operational Effectiveness Team	HoG, CPM, HR	GRC-LG Directors	Year 1	High
4.3.2.1	Monitor the effectiveness of programme delivery in terms of staff, time, and finances	M&E, FA, AD		Year 1-5	High
4.3.2.2	Where possible and appropriate implement cost saving measures	HoG, CPM		Year 1-5	High
4.3.3.1	Consult with relevant departmental heads to improve strategic programme delivery	M&E, HoG, CPM	RSPB	Year 1-5	High
4.2.4.1	Establish and maintain organisational email domains and create shared online workspaces	AD, HoG, HR	RSPB	Year 2-5	Medium
4.2.5.1	Upgrade IT services and network computers and printers	AD, HR		Year 2-5	Medium

PART THREE: REFERENCE MATERIALS

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APPENDICES

25th January, 2025

Minute of meetings held at Twai Island for extension of Buffer zone

Agenda

- Arrival and registration of stakeholders
- Individual prayers
- Statements from stakeholders (PC & RC)
- Purpose of the meeting
- Tiwai Buffer Community discussion
- AOB

All participants were present in the morning and meeting started late afternoon precisely by 1:30 pm.

Individual prayers were done by all present

P. C M.P Kanneh welcome all present and explained to community members the importance of conserving the forest and the role of community members in term of owing a forest and benefit they can derive from conservation if they truly endure the process

He further explained the purpose of the meeting as a way of relaying message from the Government about the World Heritage Site and our current status regarding the buffer zone, he also explained that Gola Rain Forest has their own buffer zone extending as far as 4 kilometer, since Tiwai is a small place, we are negotiating our own buffer zone to be from the 8 communities to the Tiwai island.

Regent chief Egugiama Mustapha express the essence of innovation in conservation practices and the answer for the eight communities around Tiwai, he advice that community members should trust conservation over slash and burning farming system instead he encourage them to adopt agroforestry farming and climate smart agricultural practices.

He further tells community representatives to appreciate what nature has gifted them and embrace the Gola Tiwai Complex World Heritage Site process.

Chief Alhaji Mohamed Kamara, section chief Taitema express application for the hard work of stakeholders, Government and EFA for the leadership skills they have showed so far and he believe all the 8 communities will adopt the idea of the extension of the buffer zone.

Mohamed A.T Gegbe imam Boma community explained that all the 8 communities have their livelihood depend on the smaller islands around the Tiwai island as a result they are asking government EFA and chiefdom stakeholders to help them with alternative livelihood educational materials (books and uniform) and university scholarship for their children.

Ansu Faika of Boma asked P.C Kanneh and other stakeholders to explained the detail meaning in their local language "buffer zone" the "**DO's and DON'T"**.

Minnah Conteh explained the meaning of buffer zone to all present, he further describes buffer zone in the simplest form as an outer part of tire that will help to protect the inner tire from harm or injuries. He further explained slash and burned, mining and logging should not be done in the buffer zone.

Minnah Contech asked what compensation will be made to communities for leaving the land from farming, mining and logging, he also asked the status of the eco-lodge which from the initial discussion before the construction was to be managed by the community which has not materialized after the construction completed.

P.C M.P Kanneh asked all representatives to go and have consultative meetings in their various communities and put together ideas in request of what is needed from the government as their alternative livelihood they the two TIAC chairperson will compile and present to the Minister of Environment and other key stakeholders during the next meeting, he also advised in the request they should reques for support from Environment Ministry for community trees planting.

He further admonished them to be united in this process and realized this planning is key for their future generation and to include their women's and children in this all important planning stage.

P.C Kanneh in his closing statement asked communities to request for Forest Development fund from Government as an alternative to engaging in activities that could have negative impact in their communities.

The PCMP making a statement to the chiefdom and section authorities on the buffer zone extension as required by IUCN

Statements made by one of the section chiefs on the subject matter

Written and submitted:

Amadu Koroma,

Conservation Officer.

UPDATE ON MEETING OF MINISTERS, PARLIAMENTARIANS, PARAMOUNT CHIEFS AND RIGHT HOLDERS HELD ON FRIDAY, 24TH JANUARY, 2025, FROM 11:00 A.M TO 12:00 P.M AT THE CONFERENCE HALL OF THE MINISTRY OF TOURISM AND CULTURAL AFFAIRS

Introduction

The Permanent Secretary of the Ministry of Tourism and Cultural Affairs moderated the meeting and stressed the importance of the process of providing the supplementary information requested by International Union for the Conservation of Nature (IUCN) after silent individual prayers, introduction and welcoming all the members that were present.

The discussions projected the key issues and areas of the supplementary information requested by the IUCN that included the following projected by the Focal Person and explained by the Executive Director of the Environmental Foundation for Africa and Manager of Tiwai Island.

1) Clarify through detailed maps the boundaries of the buffer zone for Tiwai Island Wildlife Sanctuary, in line with paragraphs 99 and 132 of the Operational Guidelines.
2) Indicate through maps the potential dynamics of Moa River in relation to the boundaries of the nominated property and its proposed buffer zones, especially in regard to Tiwai Island Wildlife Sanctuary
3) Provide an overview of the implementation of the actions defined in the Interim Management Plan 2023 2025 for Tiwai Island Wildlife Sanctuary and the Interim Management Plan for Gola Rainforest National Park;
4) 4) Formally submit, as part of the supplementary information, the new Gola Rainforest National Park Management Plan 2024-2029, which was already shared with the mission team, to ensure that this new management plan is formally registered as part of the nomination dossier;
5) 5) Provide the final management plan for Tiwai Island Wildlife Sanctuary, or in case this plan is not yet available, an update on the finalization of this management plan, including a copy of the latest version of the draft and the firm schedule for its final approval and subsequent implementation;
6) 6) Provide a summary on how the implementation of these management plans ensure: a. An integrated management across all four nominated component parts; b. Forest restoration in the buffer zone; c. Mitigation of the threats identified in the nomination dossier.
7) Willingness to expand the buffer zone of Tiwai Island Wildlife Sanctuary to provide a similar layer of protection as the buffer zones of the other nominated component parts;
8) Willingness to explore options to strengthen the monitoring of threats to the nominated property and buffer zones, including through further strengthened engagement with local communities.

Concerns over the buffer zone's extension were raised which include the following:

- The critical nature of land matters in the provinces and Tiwai owned by land- holding family and the knowledge of the national legislation providing for a one kilometer buffer were stressed by the Paramount Chief Member of Parliament of Barri and Koya where

Tiwai Island sits and must be made known by IUCN, also noting that, left with him alone, the whole of Kenema District will maintain its forest covers to provide the needed oxygen for the nation.

- Benefits to be gained by communities for the extension of the buffer zone and alternative livelihood of people to allay their fears should be key considerations.

The meeting revealed through the Executive Director, EFA that that there has not been over the years a specific physical demarcation beyond the river and the buzzer seems blur and indefinite, the need to re- define land use pattern that are environmental- friendly, involvement already of eight communities in the Tiwai beneficiary arrangement, assurance of the community of participation and shared benefits and the need for the PCMP to engage the local authorities to help educate the people of their communities on the benefits they stand to gain when we attain a World Heritage Status.

The Head of Gola noted the need to maintain the river as the buffer, benefits of heritage status to communities and the country as a whole, the education of the community people to understand, need to do coordinates and appealed to the PCMP to encourage people to be part of the process.

The Minister of Tourism and Cultural Affairs and the Deputy Minister of Environment and Climate Change reinforced the need for engagement of the communities by the PCMP to know the importance of accepting the extension for their own benefits and the nation as a whole. They stressed that it is possible as long as we find a nice and clear way of communicating the current and potential benefits of achieving a World Heritage status.

Actions to be taken

1. Engage communities
2. Visitation of site and demarcation of boundary/ buffer zone
3. Meeting with communities by Members of Parliament, Paramount Chiefs and Chiefs- 23rd to 31st January, 2025 and feedback reported
4. Visitation later by government officials- Ministers of both Ministries preferably during the 1st week of February, 2025
5. Need to figure out proposals, programmatic events and activities for the community people

Cross- section of right holders and national coordinating committee members on a update meeting and sharing of the supplementary information required by IUCN

Compiled and submitted:

Ishmeal Abu Kamara.

Assistant Director of Culture, Creativity and Innovation.

Focal Person, Heritage Matters

TIWAI ISLAND

CO-MANAGEMENT PLAN

2020-2030

March 2020

Citation

The Co-Management Plan of Tiwai Island Wildlife Sanctuary – 2020-2030

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* Lead Consultant

Commissioned by Tiwai Island Administrative Committee (TIAC) with supervision from the Environmental Foundation for Africa and the Center for Biodiversity Research at Njala University.

Funded by the United States Agency for International Development (USAID) through the West Africa Biodiversity and Climate Change (WA BiCC) Program. Coordinated by the Royal Society for the Protection of Birds.

This document is made possible by the generous support of the American People through the United States Agency for International Development (USAID). The contents of this report are the sole responsibility of its authors and do not necessarily reflect the views of USAID or the United States Government.

Front page photo: ***A group of local community people at Kambama village posed for a picture with a number of tourists to the Tiwai island Wildlife Sanctuary***

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ACRONYMS

CEPF	Critical Ecosystem Partnership Fund
CR	Critically Endangered
CSO	Civil Society Organsation
CTF	Conservation Trust Fund (NPAA)
DSA	Daily Sustenance Allowance
EFA	Environmental Foundation for Africa
EN	Endangered
EPA-SL	Environmental Protection Agency, Sierra Leone
EVD	Ebola Virus Disease
GTZ	German Technical Corporation
FD	Forestry Division
FoSED	Food Security and Economic Development
LC	Least Concern
MDAs	Ministries, Departments and Agencies
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
MRU	Mano River Union
NGO	Non-Governmental Organization
NPAA	National Protected Areas Authority
NT	Near Threatened
NTFP	Non-timber Forest Products
NU	Njala University
PA	Protected Areas
RSPB	Royal Society of the Protection of Birds
SWOT	Strengths, Weaknesses, Opportunities and Threats
TCC	Tiwai Community Committee
TIAC	Tiwai Island Administrative Committee
UK	United Kingdom
USAID	United States Agency for International Development
VU	Vulnerable
WABiCC	West African Biodiversity and Climate Change

ACKNOWLEDGEMENT

The development of a co-management plan for Tiwai Island has been made possible through the support and collaboration of the following list of groups and individuals to whom we express sincere gratitude:

- Tiwai Island communities of Koya Chiefdom (Geima, Segbema and Mapoma) led by Paramount Chief Alameen Kanneh, and Barry Chiefdom (Boma, Kambama, Jene, Sarhun and Naihun) led by Regent Chief Vandi Rogers, for their unflinching support during the consultation process. The Late PC Vandi K. Magona of Barrie Chiefdom (may his soul rest in peace) was very supportive of the Tiwai Island conservation program and the preparation stage of the co-management consultation process.
- Members of the Tiwai Island Administrative Council (TIAC), particularly the Environmental Foundation for Africa (EFA), Njala University (NU), for providing logistic and technical support at every stage of the process.
- Royal Society for the Protection of Birds (RSPB) for coordination of the funding.
- West Africa Biodiversity and Climate Change Project for providing the funds required for the preparation of this management plan.

EXECUTIVE SUMMARY

Tiwai Island is the longest running community led conservation initiative in Sierra Leone. Until the Sierra Leone Civil War (1991-2001) "core funding" for conservation and research was provided by two American Universities; there has been no core funding since then. In 2002, the Critical Ecosystem Partnership Fund, administered by Conservation International and financed by the Global Environment Facility and other donors, provided a medium-sized grant to reconstruct the research and ecotourism facilities on Tiwai Island. The visitor centre constructed through support from the CEPF, was formally reopened in April 2006 and has hosted 400-600 visitors per year. Nearly three hundred million Leones, has been distributed to host communities, in the last 14 years. Visitor fees were just sufficient to cover running costs and maintenance cost for facilities and staff. Small grants from a variety of sources have allowed the gradual development of facilities and the recovery from unforeseen events. The twin event of the sub-regional EVD in 2014 and a destructive storm in 2015 cause the closure to visitors and researchers and so EFA had to cover much of the cost for facilities and staff maintenance. Visitors only returned to the island in late 2015 after major rehabilitation, allowing the generation of badly needed income to sustain the Sanctuary, provide some employment and financial benefits to the communities.

Most families in the eight communities depend on subsistence farming, whilst the forests on the mainland provide opportunities for hunting, harvesting NTFP, and the production of timber planks. As population pressure grows on the "mainland" the resources on the Island are becoming increasingly vulnerable to exploitation. The presence of diamonds is suspected and trial pits are regularly dug, fortunately there have been no major finds so far. Tiwai Island provides one of the few paid employment opportunities in the area; employing forest guides, boatmen, cooks and labour for the maintenance of trails etc. Other programs have included; encouragement of handcrafts, improved husbandry and processing of cocoa, a lucrative trade selling cola nuts to Carma Cola, building bridges, guest houses and schools, installation of solar lighting and phone charging centers and so on. Currently management is conducted through TIAC, but attendance to meetings by many of the government and non-governmental stakeholders is irregular due to logistical constraints. Consequently, the burden of administration has largely been borne by EFA, the two Paramount Chiefs of Barri and Koya Chiefdoms and the Department of Biological Sciences, Njala University.

In 2013, the Tiwai Island Wildlife Sanctuary was one of four sites, included on the *"tentative list"* of World Heritage Sites, following applications by; Sierra Leone's Monuments and Relics Commission, the Gola Rainforest National Park and the Environmental Foundation for Africa. Recognising the potential of a successful joint application by the Gola Forest NP and Tiwai Island Wildlife Sanctuary, EFA and the GFNP Management agreed in 2014, to submit a joint application to the World Heritage Commission for full Heritage status. One of the requirements for full status is that there is an agreed and sustainable management plan. As a result, EFA obtained funds in April 2019, from WABiCC (West African Biodiversity and Climate Change project) and RSPB

(Royal Society for the Protection of Birds) to commission a consultation process with the Tiwai host communities, that would ultimately lead to the development of sustainable and fit-for-purpose management plan. Full details of the three consultation activities (communities, chiefdom and stakeholder) and the full synthesis report and recommendations are attached as annexes to this executive summary.

The over-reliance on the core members of TIAC is unsustainable, judged as being a monopoly or oligopoly by a few people and being less participatory than it could be, justifying the need for a restructuring of the management system. Key recommendations are: (i) A successor to the current TIAC needs to develop detailed MoUs with the communities and secondary stakeholders, respectively, clearly outlining roles and responsibilities of all parties involved; (ii) A comprehensive biodiversity assessment of the Island is undertaken, with particular emphasis on the heterogeneity of the forest.

SECTION I - BACKGROUD INFORMATION

1.1 What is co-management in the context of the Tiwai Island

1.1.1 Definition and concepts

'Co-management' (also called: participatory management, collaborative management, joint management, mixed, multi-party or roundtable management) – is a process in which two or more social actors (resource users) negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities for a given area or set of natural resources (Borrini-Feyerabend et al. 2007). It guarantees ***specific rights and responsibilities relating to information and decision-making***. Co-management can also be seen as a pluralist approach to managing natural resources, incorporating a variety of partners in a variety of roles, generally to the end goals of environmental conservation, sustainable use of natural resources and the equitable sharing of resource-related benefits and responsibilities. In the loose sense, the present Tiwai Island Administrative Committee (TIAC), which works through a Secretariat based in Freetown, and includes representatives of the local community (there are eight host communities surrounding Tiwai Island), Sierra Leonean Government, other stakeholder organizations and the institutions managing the Tiwai Island's ecotourism and research facilities Environmental Foundation for Africa (EFA) and the then Njala University (NU) already has the essential elements of Co-management.

1.1.2 Background on Tiwai Island prior to the co-management plan

Tiwai Island is the longest running community led conservation initiative in Sierra Leone. Until the Sierra Leone Civil War (1991-2001) "core funding" for conservation and research was provided by two American Universities; there has been no core funding since then. In 2002, the Critical Ecosystem Partnership Fund, administered by Conservation International and financed by the Global Environment Facility and other donors, provided a medium-sized grant to reconstruct the research and ecotourism facilities on Tiwai Island. The visitor centre was formally reopened in April 2006 and since then, there has been an average of between 400-600 visitors per year typically staying one or two nights. Nearly three hundred million Leones (about $30,000) has been distributed to the host communities, representing approximately 20% of gross revenue, in the last 14 years. Visitor fees ($30 international, $15 national visitors) were just sufficient to cover running costs of maintenance (buildings, boats, trails, etc.) and payment of local staff; the surplus is distributed annually to eight surrounding communities. Small grants from a variety of sources have allowed the gradual development of facilities and the recovery from unforeseen events.

In June 2014, the island was closed to visitors and researchers for 15 months, due to the national and regional health emergency caused by the Ebola virus disease. With zero income from tourism

or research, maintenance of the facilities and financial support for Tiwai staff was subsidised by EFA. In October 2015, one month after reopening the island to visitors, there was a major storm that destroyed nearly all the buildings at the visitor centre. It took another year for the facilities to be restored, so that visitors could once more return to the island, and help generate the badly needed income to sustain the Sanctuary, provide some employment for the local people and financial benefits to the communities.

Most families in the eight communities depend on subsistence farming, with some plantations of cocoa and oil palm. The forests on the mainland provide opportunities for hunting, harvesting NTFP (non-timber forest products), and the production of timber planks. As population pressure grows on the "mainland" the resources on the Island are becoming increasingly vulnerable to exploitation. The presence of diamonds is suspected and trial pits are regularly dug, fortunately there have been no major finds so far. Tiwai Island provides one of the few paid employment opportunities in the area; employing forest guides, boatmen, cooks and labour for the maintenance of trails etc. These opportunities are limited by the seasonal nature of tourism and because total visitor numbers are low. Indirectly Tiwai has attracted a wide range of development partners but these development activities are not always "branded" as being a result of TIAC activities. Programs have included; encouragement of handcrafts, improved husbandry and processing of cocoa, a lucrative trade selling cola nuts to Carma Cola, building bridges, guest houses and schools, installation of solar lighting and phone charging centers and so on.

Over the last four decades the needs of the communities and the pressure on biodiversity have increased, at the same time the key stakeholders and the relationships between them have changed. Currently management is conducted through TIAC (Tiwai Island Administrative Council), unfortunately, attendance by many of the official members from national and government bodies is irregular due to logistical constraints. As a result, the burden of administration, especially of the tourism, has largely fallen onto a single NGO (the Environmental Foundation for Africa), the two Paramount Chiefs of Barri and Koya Chiefdoms and the Department of Biological Sciences, Njala University which is responsible for coordinating all research activities on the island.

1.1.3 Why engage in co-management at Tiwai?

Co-management ensures a wild and inclusive participation in natural resources management. There is partial devolution of the responsibility for the management of natural resources to local communities, who are not only the rightful owners, but whose lives and livelihood depend on maintaining the proper functioning of the ecosystem. Traditionally, local communities rely and live on the resources surrounding them, in terms of food (agricultural and wild), medicinal resources, biomass energy and other ecosystem services. In a country like Sierra Leone, which has a low human development index, low income levels and high unemployment rates particularly

among rural population, it is very necessary that the local population is accorded the opportunity to be involved in the management of their natural resources.

Full participation by the local people will ensure ownership and understanding of the benefit of sustainable management and protection of natural resources. This has implications for natural resource use and the maintenance of the optimum ecosystem conditions for the benefit of current and future generations. As long as the local communities are aware of the immediate and continued provision of resources upon which their lives depend, they will collaborate in any attempt to conserve such resources. In the case of the surrounding communities of the Tiwai Island, there are clear indications of the willingness among the traditional leaders and their subjects to be engaged in the management of the island. These communities are already accruing benefits from proceeds of the ecotourism programme on Tiwai Island, although they are expecting more, which is normal under the prevailing circumstances.

1.1.4 Experiences and lessons from co-management arrangements in Sierra Leone

There are many successful co-management experiences from different parts of the world and even in West Africa. However, it would be good to mention a few on-going co-management arrangements in Sierra Leone, which have proven success that are worth mentioning. It would also be prudent to learn from the successes and challenges of these existing co-management systems mentioned as follows:

- The Gola Forest co-management arrangement with communities on the utilization of the resources within the buffer zones. The local communities' benefit from direct cash payments and the provision of scholarship for children and social amenities such as court barry, water wells, small bridges, particularly through funds generated from ecotourism.
- Mamunta-Mayosso Wildlife Sanctuary is being managed though a collaboration between the officers and rangers from the NPAA and the local communities. Seeds and farm tools are being provided to the local farmers using proceeds derived from ecotourism
- In the Sierra Leone River Estuary, various levels of cooperation was established with different local community clusters for the management and control of resources in their respective local areas. The benefits to the communities include the protection from environmental disaster such as flooding and other ecosystem services, whilst mangrove cover in gradually increasing in many locations.

1.2 The Historic Management Context of Tiwai Island

The Tiwai Island Wildlife Sanctuary came to existence as a result of the recognition of its importance to wildlife and general biodiversity conservation nationally and regionally. The following outlines the key steps that led to the establishment of and operations of the sanctuary spearheaded by the TIAC.

DATE	ACTIVITY
Mid -1970	The biodiversity value of Tiwai is identified by researchers based at Njala University. A very dense and diverse primate fauna was observed; other West African endemics such as the pygmy hippo were also proved to be present.
Late -1970s	Discussions start with the two Paramount Chiefs, especially V.K. Magona the VIth of Barri about reducing hunting and other exploitation on the Island.
1987	Tiwai Island is given legal protection as a "Game Sanctuary"
Late- 1980s	The "golden age" of Tiwai Reserve, two American Universities, Hunter College and the University of Miami provide significant support to researchers on the Island (resulting in several ground-breaking papers led by Oates, Whitesides, Fimbel etc.). A Research Centre is established by Njala University and a Tourist Camp established with American funds (although the number of tourists unknown).
1989	A draft management plan is written by a Peace Corp volunteer using the American style of zoning. The management plan envisages limited economic exploitation (farming, logging etc) under the control of a "Supervisor". The extent to which the full plan (~100 pages) was discussed with the communities is unclear, the plan was never formally adopted and fortunately farming and logging did not restart.
1980's	Documentary "Island of Apes" produced for Anglia TV (UK)
1991-2001	Sierra Leone Civil War. Researchers and Peace Corp volunteers were evacuated very early on in the war as Tiwai is close to where the insurgency started. Very high levels of poaching occurred during this period. Minimal financial support was provided from overseas and distributed through the Department of Forestry.
2000	First visit to Tiwai by staff from the Environmental Foundation for Africa (EFA).
2002	Re-establishment of TIAC (Tiwai Island Administrative Council) with input from line Ministries (Forestry, Tourism), Local Government (MP's, District Councillors), Traditional Authorities (Paramount Chiefs), Academics (Njala University) and NGO's (EFA).
2004	Work by Ibrahim Bakarr suggests some primates such as Campbell's monkey are now at 10% of their pre-war numbers.
2002-2006	Funds obtained from the Critical Ecosystem Partnership Fund (CEPF), UNHCR and Irish Aid are used by EFA, partnering with Njala University, to reconstruct and restore the biological research and ecotourism facilities on the Island, provision of a boat etc. Pre-war funding bodies (i.e. Hunter College and Miami University) appear unable or unwilling to re-establish ties with Sierra Leone.
2006	Official re-launch of Tiwai as an ecotourism destination and site for research
2002-date	Numerous development initiatives are implemented with varying degrees of success and not all are "branded" as being due to the conservation of Tiwai Island under the leadership of TIAC. Examples include; two of the culvert bridges on the road from Potoru – Kambama (funded by GTZ through EFA), the school at Kambama (funded from visitor income), Solar power for lighting and charging in all Tiwai Communities and the schools and clinics in their chiefdom headquarters Potoru and Boama (funded by the EU and implemented by EFA). Agricultural development (e.g. Food Security and Economic Development – FoSED – funded by European Union, implemented by EFA and the international NGO Welt Hunger Hilfe). Eco-tourism development, employment of locals in guiding and supporting tourism, boatmen, construction and maintenance of facilities, cooking for visitors and assisting researchers, etc.
2013	The Tiwai Island Wildlife Sanctuary was one of four sites, included on the *"tentative list"* of World Heritage Sites, following applications by; Sierra Leone's Monuments and Relics

	Commission, the Gola Rainforest National Park and the Environmental Foundation for Africa.
2013-2014	The need for a new management structure is identified; work is undertaken by Environmental Resources Management Foundation, UK on a “pro-bono” basis and an eco-tourism management plan is drafted by an EFA intern. Extensive discussions are undertaken internally and externally, but a number of serious issues remain unresolved.
2014-2015	Ebola crisis. Zero income from visitors. EFA and partners mobilise some resources for the communities (rice and cash).
~2015	By this time attendance and input from most members of TIAC has dwindled, to the extent that EFA and the two paramount Chiefs are the only active members.
2015-2016	Major storm on Tiwai Island causes extensive damage to buildings and various equipment including solar lighting at the visitor / ecotourism camp. EFA mobilises funds and works with local community to rebuild the structure and restore the services
2017	Major storm causes extensive damage to buildings at Field Research Station. A CDC grant enabled Njala University to repair, refurbish and upgrade the facilities at the field research station.
2018-2019	Funds are obtained from USAID, through WABICC, RSPB and Gola National Park to commission consultants to prepare a new management plan Consultants appointed.

Men and boys of various age groups from the local communities after the re-opening of the sanctuary at the end civil conflict of 1991-2002.

SECTION II - BIOPHYSICAL CHARACTERISTICS

2.1 Topography, geology and soils

There has been no particular study done on the geography and geomorphology of the Tiwai Island. However, the island is considered as part of the Gola biogeographic complex and has similar biophysical characteristics. Much of the description given below has been extracted from the information obtained for the Gola forest based on Klop et al. (2008).

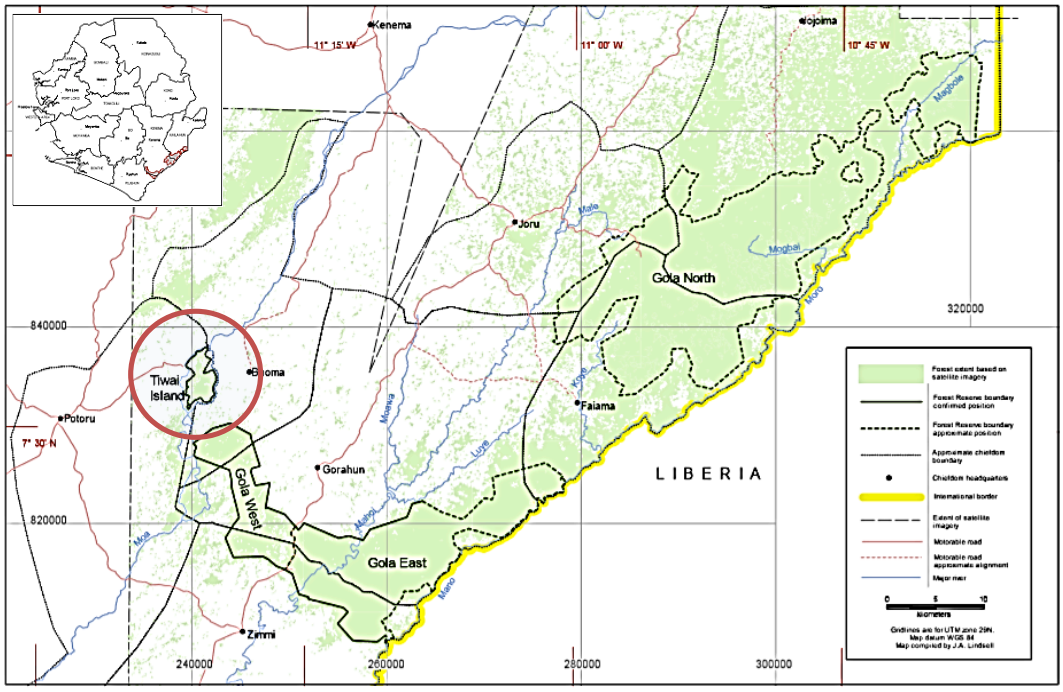


Figure 1 – Map of the Gola-Tiwai Island complex. Tiwai Island is circled in red on the left of the map.

The Tiwai lsland is proximal to the western edge of Gola West, which is characterized by gentle slopes generally below 5° in Gola West (and below 10° in the western and central parts of Gola East. Generally, the Gola Forest is characterized by ancient crystalline rocks of the Precambrian period. The granite greenstone complex, which is common in the area, contains iron and magnesium-rich metamorphic rocks overlying a granitic basement rich in quartz (Wilson 1965). The soils in Gola are mostly derived from granite. They are usually freely draining sand and gravels, with varying proportions of lateritic gravel (Iles et al. 1993).

2.2 Climate and weather patterns

Rainfall in and around the Tiwai Island is consistent with that in the tropical forest zone in Sierra Leone. The only empirical data available for Tiwai Island rainfall is provided by Oates et al. (1990) of an estimated mean annual rainfall of 2708 mm. Values for Gola forest range between 2500 and 3000 annually, based on a number of independent records in different locations 1972 and 1993 (see Klop et al., 2008).

2.3 Biodiversity

2.3.1 Vegetation types and floral diversity and distribution

The nature of the vegetation on Tiwai Island is a microcosm of that in Gola. Although the historic vegetation cover is assumed to be closed evergreen forest, because of human activities mainly from farming, some modification has taken place and so there is a mixture of vegetation types on the island now. There are over 700 plant species on the island, with trees constituting the largest proportion of growth forms. The dominant type is evergreen forest, with characteristic species including *Heritiera utilis, Brachystegia leonensis, Calpocalyx aubrevillei* and *Sacoglottis gabonensis*. Along the edges of the island where the vegetation is more or less riparian forest, *Uapacca guinensis* and *Protomegabaria stapfiana* are common. Moist semi-deciduous forest also occurs in places and is dominated by species such as *Cynometra leonensis, Parinari excelsa, Parkia bicolor* and *Piptadeniastrum africanum*. There are patches of freshwater swamp forest with Raphia palm present and characteristic tree species are *Uapaca* spp, *Nauclea diderrichii* and *Newtonia duparquetiana*. Areas that have experienced some farming and logging and have been left to regrow are Forest regrowth and secondary forest and the dominant tree species are *Carapa procera, Macaranga barteri* and *Musanga cecropioides*.

2.3.2 Diversity and status of fauna

Tiwai Island is holds 11 primate species and is known to have one of the highest densities of anywhere in Africa. Primates include Western Chimpanzee *Pan troglodytes verus* (CR), Diana Monkey *Cercopithecus diana* (EN), Red Colobus Monkey *Procolobus badius* (VU), Sooty Mangabey *Cercocebus atys* (VU) Black-and-White Colobus Monkey *Colobus polykomus* (NT), Campbell's Monkey *Cercopithecus campbelli* (LC), Mona Monkey *Cercopithecus mona* (LC), Callithrix Monkey *Cercopithecus sabaeus* (LC), Olive Colubus Monkey *Procolobus verus* (LC), Lesser Spot-nosed Monkey *Cercopithecus petaurista*. As indicated in parenthesis 5 species are listed as threatened by IUCN Red List (2019) [1 Critically endangered (CR), 1 Endangered (EN), 2 Vulnerable (VU), 1 Near threatened (NT)]. The rest are of low conservation interest - Least Concern (LC).

Top – Diana Monkey *Cercopithecus Diana* (EN); Black-and-White Colobus *Colobus polykomus* (VU)
Bottom – Campbell's Monkey *Cercopithecus campbelli* (LC); Western Chimpanzee *Pan troglodytes verus* (CR)

2.4 Unique biophysical features and potential for sustainable non-extractive investment

Tiwai Island is the biggest of the islands within the Moa River, and one of the few islands within the river systems in Sierra Leone with a close canopy moist forest. The following are biophysical features that make the island a unique place to people of diverse interests:

- Its isolation as a forested island makes it remote and pristine for a variety of research and leisure activities.
- Good forest canopy, providing optimum ecosystem services to surrounding communities and maintaining and stabilizing local environmental conditions.
- High diversity and density of primates and a variety of other mammalian, avian and other vertebrates that can be easily encountered.

SECTION III - POLICY, LEGISLATIVE AND MANAGEMENT FRAMEWORK

3.1 Gazettement of the Tiwai Island Game Reserve

The Tiwai Island was declared a Game Sanctuary by a Government Gazette Notice No, 342 of 1987. The gazette notice was signed by the then Minister of Agriculture, Natural Resources and Forestry.

The legal provision for the protection of the Tiwai island is supported in retrospect by the 1972 Wildlife Conservation Act, which spells out the regulations that apply to a Game Reserve (the legal equivalent of a Game Sanctuary) most of which are consistent with that in a National Park and Strict Nature Reserve. These regulations include the following, among other things:

No person shall in any National park, Strict Nature Reserve or Game Reserve, ***unless otherwise authorized to do so*** under this Act or by Regulations made hereunder:

a. Hunt or take possession of any wild animal;
b. Take any forest produce as defined in the Forestry Act;
c. Uproot, burn, strip the bark or leaves from, or otherwise damage any tree;
d. Set fire to any grass or herbage or kindle a fire without taking due precaution to prevent its spreading;
e. Do any act connected with forestry, agriculture or mining, excavate or prospect, drill or level the ground or construct or perform any work involving the alteration of the configuration of the soil or the character of the vegetation;
f. Fish or attempt to kill fish;
g. Set any snare, net, trap or other instrument for the purpose of catching or killing animals, or likely to catch, kill or injure any animals;
h. Introduce any species of fauna and flora, whether indigenous or imported, wild or domesticated;
i. Construct any form of dam or weir across any river or streams or otherwise obstruct the channel of any river or stream;

3.2 Other Policy and Legislative Provisions

3.2.1 The Forestry Policy 2010 and Wildlife Conservation Policy of 2010

This policy makes provision for collaboration with local communities for the management of forests and wetlands ecosystem.

Policy Statement 2: ***Support the development of collaborative partnership with rural communities and other relevant stakeholders for the sustainable management of reserve forests, to ensure sustainable stream of economic, social and environmental benefits.***

The key strategic actions:

- Develop forest management and co-management plans in cooperation with partners and/or relevant stakeholders for all Forest Reserve forestlands.
- Develop co-management agreements between partners which define roles, rights, responsibilities, benefit sharing arrangements and mechanisms for accountability.
- Develop legislative support for the recognition of collaborative forest management arrangements between lead government agencies, community-based forest management organisations, communities, the private sector, and CSO, which clarifies decision-making and enforcement responsibilities, and provides a legal basis for access rights and benefit sharing from timber and non-timber forest products.

The Conservation and Wildlife Policy 2010 has a relevant policy statement consistent with the that applies to the Tiwai island as follows:

Policy Statement 1: ***Maintain viable populations of indigenous species of flora and fauna in their natural habitats.***

The key strategic actions:

- Seek support in assessment of national status of critical species including terrestrial and aquatic flora and fauna, based on International Union for the Conservation of Nature (IUCN) Red Lists for globally threatened species and national or regional threat, endemism, range and migratory issues.
- Where such critical species are identified, apply the appropriate range of measures in this policy to monitor and improve their conservation status.

3.2.2 The Environmental Protection Agency Act of 2008 and amendments of 2012.

The functions of the Environmental Protected Agency Sierra Leone (EPA-SL) in relation to the Tiwai can be found in relevant sections of Part III Section 12 of the Act as follows:

- **12(a).** ***advice the Minister on the formulation of policies on all aspects of the environment and in particular make recommendations for the protection of the environment*****;**
- **12(l)** ***promote studies, research, surveys and analyses for the improvement and protection of the environment and the maintenance of a sound ecological system;***
- **12(m)** ***initiate and pursue formal and non-formal education programmes for the creation of public awareness of the environment and its importance to the economic and social life of Sierra Leone;***

- **12(n)** ***promote effective planning in the management of the environment.***

3.2.3 The National Protected Areas Authority (NPAA) and Conservation Trust Fund (CTF) Act

The National Protected Areas Authority (NPAA) and Conservation Trust Fund (CTF) Act of 2012, was a relevant step by government in bringing together the administrative and operational functions of all protected areas (PA) under a single supervisory agency. According to Part III section 12(1) of the NPAA Act of 2012 states the overall function, as follows:

> ***The object for which the Authority is established is to exercise oversight authority over National Parks and Protected Areas designated for conservation purposes so as to protect the fauna and flora in its natural state, promote sustainable land use practices and environmental management***

The paragraphs that follows outline specific activities that the Authority is required to perform in order to achieve its goals. These activities include among others, consistent with the co-management planning for Tiwai Island, as given in the following relevant paragraphs:

> ***p(x). developing policies and strategies for adapting the National Protected Areas system to the impacts of climate change; and***
> ***p(xi). promoting policies for enabling by local forest edge communities to participate and co-manage national resources inside and outside National Protected Areas.***

In 2019, the Government of Sierra Leone established the Ministry of Environment, which in principle, will take up the responsibility of supervising and coordinating all related environment and biodiversity issues in the country. This new Ministry may absorb the Forestry Division (FD) and NPAA (in the Ministry of Agriculture, Forestry and Food Security), both of which deal with issues pertaining to conservation and the environment. Implicitly, this will eventually put Tiwai Island under the purview of the Ministry of Environment.

3.2.4 The Local Government Act

The Local Government Act of 2004 and its 2007 amendments brought into existence the Kenema and Pujehun District Councils, which have administrative jurisdiction over all local areas within these districts. In Part V, Section 20 of the Act, it states as follows:

> ***A local council shall be the highest political authority in the locality and shall have legislative and executive powers to be exercised in accordance with this Act or any other enactment, and shall be responsible generally for promoting the development of the locality and the welfare of the people in the locality, with the resources at its disposal and with such resources and capacity as it can mobilise from the central government and its agencies, national and international organisations and the private sector.***

Specifically, the Act provides for local councils in carrying out their functions, in the following

paragraphs:

2(a). mobilise the human and material resources necessary for the overall development and welfare of the people of that locality;

2(b). be responsible for the development, improvement and management of human resources and the environment in the locality.

With regards to the use of land, the Act in Section 20 paragraph 28 stipulates that local council shall cooperate with the chiefdom council to:

28(c) making and enforcing bye-laws; and

28(d) holding land in trust for the people of the chiefdoms.

3.3 Conclusions on policy and legislations

It is clear from the legislations that Tiwai Island Wildlife Game Sanctuary is an officially recognised and gazetted protected area, which is being protected through various policies and regulatory mechanisms and instrument pioneered by the Government of Sierra Leone. The gazette notice declaring Tiwai Island a Wildlife Sanctuary was signed in 1987. However, provision was already made in the 1972 Wildlife Conservation Act specifying the prohibited activities in a game sanctuary (an equivalent of a wildlife sanctuary). The 2010 Conservation and Wildlife Policy 2010 also strengthened government position on wildlife conservation by emphasizing the maintenance viable populations of indigenous species of flora and fauna in their natural habitats**.**

Policies and legislation also strongly support the establishment of co-management arrangements with local communities for biodiversity resources management at various organisational and administrative levels, especially for community forests. The 1988 Forestry Act specifies co-management in the establishment of community forests, which is reflected in the Policy Statement 2 of the 2010 Forestry Policy. The 2004 Local Government Act, the 2008 EPA Act and the 2012 NPAA Act provides for action by these agencies to support and promote sustainable, people-oriented approaches in managing the resources of protected area, of which Tiwai island is vital.

The visit and re-opening of the Tiwai island for research and ecotourism in 2006 by the former Vice President of the Republic of Sierra Leone, Hon. Solomon Ekuma Berewa (of blessed memory), an indication of government's commitment to the conservation of the sanctuary

SECTION IV - ANALYSIS OF STAKEHOLDERS

4.1 Register of Stakeholders

The list of stakeholder given here has been categorised into three levels as given below. The descriptions of these categories are also given.

1. **The Key or Primary stakeholders**. These are the most important groups of stakeholders whose activities or policies directly impact the island. They have voting rights on critical decisions affecting the management of the island. They may also form the core membership of the future management committee
    a. The Tiwai Island Communities – the Paramount Chiefs and local community representatives
    b. National Protected Areas Authority (NPAA).
    c. Pujehun District Council
    d. Kenema District Council
    e. Environmental Foundation for Africa (EFA)
    f. Njala University

2. **Secondary stakeholders** – this group of stakeholders have policies and undertake activities that could affect the island, but they do not play direct roles in the management and administration of the island.
    a. The Environment Protection Agency (Ministry of Environment)
    b. Forestry Division, Ministry of Agriculture and Forestry
    c. Ministry of Local Government
    d. Tiwai Community Committee
    e. Conservation Trust Fund (CTF) (NPAA)
    f. The Member of Parliament Barry Chiefdom (Pujehun District)
    g. The Member of Parliament Koya Chiefdom (Kenema District)

3. **Prospective or potential stakeholders** – this group of stakeholders are those who have been identified as potential important in augmenting the operations and investment potentials of the island. They may be co-opted into the island's management committee either as permanent members or on a rotational basis as and when required.
    a. Carma Cola
    b. Ministry of Tourism
    c. The Gola Forest National Park
    d. Any NGO working in the area

4.2 Key Roles and Responsibilities of Stakeholders

GOVERNMENT:
Government is generally the lead entity tasked with the responsibility of protecting the environment and resource management. It creates policies, laws and legislation, and legal security of the resource. It coordinates and foster corporation among stakeholders, including the universities and local communities. It has the responsibility of enhancing interaction between institutions and individuals in planning, development, support, conflict management, local participation and involvement. The entire system of tourism and environmental activities should be efficiently interconnected in order to achieve sustainable development.

NON-GOVERNMENT ORGANISATIONS (NGOS):
They have a major influence in the conservation efforts of Protected Areas. The NGOs (EFA and others) and private sector partners, promote ecotourism, attract visitors to Tiwai Island and create environmental awareness within and outside the Tiwai Communities.

POTENTIAL INVESTORS:
These groups of stakeholders include any individual or group whose operations cover a range of activities relating to tourism, tour guiding and non-exploitative community development initiatives. The attract visitors to the island and provide the enabling facilities for visitors. Their activities stimulate local spending from visitors, provide opportunity for tourism initiatives to involve local communities and provide tangible benefits in order to reduce the dependency on the natural resources. They are potentially very important in providing mechanisms for mobilizing sustainable means of income to the Tiwai programme and surrounding communities.

LOCAL COMMUNITIES:
Support all protection and conservation efforts for the sustainable development of the Island. Create the necessary activities to attract tourists to the Island. Support and complement the effort of government and other partners (NGOs etc.) to develop the Island and develop initiatives that promote sustainable conservation and livelihoods for the communities.

ACADEMIA (Njala University – may incorporate other institution when necessary):
Carry out research (scientific, ecological, social, sociocultural, anthropologic, impacts etc.) in the Island. Produce educational materials both for the general public and academic communities. Create the enabling environment for research. Attract researchers to the Island.

LOCAL AUTHORITIES
Complement the efforts of government and other stakeholders in assuring the security and maintaining the sanctity of the Island. They develop bye-laws and ensure the communities are visitor-friendly. They also provide strategic oversight that entails regular monitoring and supervision. They should also have the legal frame work that would support the review of the NGO's activities and also to participate in the recruitment of the NGOs/Investors with specified clauses.

4.3 Analysis of the stakeholder engagement in the Tiwai Island management

Stakeholders	Engagement methods and activities	Level of engagement	Responsible (from project team)	Description of past engagement (methods, results achieved etc.)	Potential engagement in co-management	Evidence of engagement
Environmental Foundation of Africa (EFA)	Organizes meetings, implementation of activities, management of the island, member of TIAC	Multiple levels of engagement- information, consultation, collaboration and service delivery	EFA, TIAC, Tiwai Management, Njala University	Being involved since post war rehabilitation and management of the Island	Facilitate the development of projects and programmes and solicit funding	Reports including meeting minutes, donor reports etc
Njala University	involved through meetings, coordination of research, personal	multiple levels of engagement- information, consultation, collaboration and service delivery	Njala University, Head of Department, Biological Sciences Dept.	Being involved in pre and post war setting up, rehabilitation, research and management of the island	Carry out further research and surveys. Facilitate research by other institution	Reports including meeting minutes, donor reports and papers
Tiwai Island Administrative Committee (TIAC) or its new form	Involved through Meetings, management of the island	Multiple levels of engagement- information, consultation, collaboration	TIAC Chairman, Paramount Chiefs	Designed to work with EFA and Njala University as members with other stakeholders to manage the Island	Provide oversight in the administration and management of the Tiwai Island, including projects, programmes and funds.	Reports including meeting minutes
Forestry Division, Ministry of Agriculture and Forestry	Involved through Meetings, management of the island, member of TIAC	Multiple levels of engagement- information, consultation, collaboration and service delivery	Director of Forestry	Previously managed the Island before the War with Hunter College in New York		Reports including meeting minutes

The Environment Protection Agency (Ministry of Environment)	Meetings, and as a member of TIAC	Multiple levels of engagement- information, consultation, collaboration	Through EPA-SL	Was previously involved as the Ministry of Lands, Housing and the Environment	Could be more involved through in fund raising and marketing of the island	
Ministry of Local Government	Meetings, and as a member of TIAC	Multiple levels of engagement- information, consultation, collaboration	Through District Councils	Was involved for occasional meetings as deemed fit	To be more involved to enhance sustainability and through incorporation into Council programs	
District/Local Councils	Meetings, emails, updates and as a member of TIAC	Multiple levels of engagement- information, consultation, collaboration	Through District and Local Councils	Was involved for occasional meetings as deemed fit	Councilors in the two Chiefdoms of the host communities to be more involved in sensitization and bringing potential project activities to their communities	
CSOs and Local NGOs	Meetings, and through Umbrella organization				Through umbrella organization be involved in the board for transparency and accountability. Will also potentially bring funding and raise awareness	

4.4 Opportunities and Potential Support from Stakeholders towards Tiwai Island Management

Agencies or Bodies	Opportunities and potential support
GOVERNMENT Ministry of Tourism Forestry Division (MAFFS) EPA-SL NPAA (MAFFS) EPA (Min. of Environment) Ministry of Local Government	• Human Resources staff/personnel • Various legislations (Forestry Act, Wildlife Act, EPA Act etc) • Community mobilization (community respect for Government and local authorities) • Some trained and experienced staff (Professionals, technicians and auxiliaries) • International conservation NGOs support • Community participates in forest management • Increased environmental awareness of the local communities • Community willing to work with staff of the various MDAs • Capacity building of some staff by partners • World Heritage Status is possible Memoranda of understanding with NGOs and other partners • Increased opportunities for tourism • Co-Management agreements with stakeholders. • Tiwai being part of the wider Gola trans-boundary landscape. • Existence of the MRU strategic plan and signed MoU with Liberia
NGOs EFA RSPB Other local and international NGOs	• Some trained and experienced staff • Resource mobilisation • Provide some funding of the salaries for staff. • Provide other supporting resources (vehicles etc) • International conservation NGOs support • Community willing to work with staff Capacity building of some staff by partners • Memoranda of understanding with local community, government agencies and other private sector actors
ACADEMIA Njala University Fourah Bay College International Research bodies and universities	• Local and international partner institutions • Research funds and research facility maintenance • International conservation NGOs research support • Community participation in research and articulation of traditional knowledge
LOCAL COMMUNITY Community Based Organisations Traditional Authorities Tiwai Community Committee	• Knowledge about the resources • Good local support • Common language and common culture • Employment

	• Community development • Improved socio-economic status • Infrastructure • Recreational and leisure facilities • Skills training • Development of cultural heritage attraction (traditional markets, handicrafts, and cultural events)
POTENTIAL INVESTORS Carma Kola Tour Operators Other businesses	• Community investment • Resources, some personnel • Increased opportunities for tourism • Community willing to work with investors • Increased income to local communities leading to enhanced livelihoods

SECTION V - THE STRATEGIC DIRECTION OF THE CO-MANAGEMENT PLAN

5.1 The Vision

The Tiwai Island is a well-managed conservation entity, supporting viable populations of wildlife and other biodiversity and providing sustainable ecosystem services for the benefit of its local communities, the nation and the global environment in general.

5.2 The Objectives of the Plan

1. To establish a mechanism that would ensure a holistic management of the resources and programs of the Tiwai Island, with strong participation by all stakeholders.
2. To harness the potentials and opportunities that the Tiwai Island offers to its local communities, the people of Sierra Leone and visitors alike.
3. To formulate mechanisms and actions that would ensure a sustainable management of the biodiversity of the island and provide sustainable benefits to the local communities.

5.3 Strategic Outputs and Indicators

Output 1. By 2030, the Tiwai Island becomes a viable model for wildlife conservation that is nationally and internationally recognized.

Indicators

- The number enquiries on the Tiwai Island web site increased by at least 50%,
- The Tiwai Island is cited in many references for its effective management of biodiversity, resulting from various referenced study visits to the island.
- Tiwai Island is accepted and listed as a biosphere reserve by the World Heritage Commission, as part of the Gola National Park complex, following completion of the on-going application process.

Output 2. By 2030, the Tiwai Island would have attracted over 100% its current visitor's number, and is an internationally well-known destination for ecotourism.

Indicators

- Tourist numbers to the Tiwai Island increased by at least 30% year on year for the next 10 years. Information leaflets and tourism bulletins produced list Tiwai Island among the best destination for tourism in Sierra Leone
- At least five national and international tour companies list Tiwai Island as a key destination for their clients in and outside Sierra Leone.

- One or more additional facilities for visitors (on or off island) built through internally generated and/or external funding.

Output 3 By 2030, the Tiwai Island would have become a self-sustaining entity though the through the generation of adequate funds from its various programmes and projects.

Indicators

- A 50% increase in revenue generated on an annual basis from various services offered on the Island
- A viable mechanism for sustaining funding on the island is established and has attracted at least two major investments. One possibility could be a trust fund established or a major financial investment made (e.g. fixed deposit, bearer bund etc.) as a mechanism to provide a healthy reserve to sustain the operations of the island.

Output 4 The people living in the local communities are well educated about the benefits from the management of the Tiwai Island and are willingly providing the relevant support to sustain its operations beyond 2030.

Indicators

- At least 40% of the employees working in the Tiwai Island conservation initiatives are from the local communities;
- At least two community development initiatives (educational, recreational or commercial) established and bringing benefit to the local people.

Output 5 By 2030, strong and effective collaboration among key stakeholders and investors, would have led to the establishment of viable community-driven initiatives for sustainable biodiversity conservation and livelihoods.

Indicators

- Tiwai Island is managed by all-inclusive committee with strong community representation and involvement.
- At least two private investments for Tiwai Island and/or local communities established and are generating sustainable financing mechanisms for the benefit of biodiversity and the local people.
- Memoranda of Understanding or cooperation agreements signed between all stakeholders and the local communities as partners for biodiversity and local development projects.

SECTION VI - MANAGEMENT OPTIONS FOR BIODIVERSITY CONSERVATION

6.1 Biodiversity Research

The long-term management effectiveness of Tiwai Island depends on a sustained effort to promote research and generate knowledge for biodiversity conservation. Two major components are proposed to address this need: species surveys and habitat assessments, and ecological and behavioral research.

6.1.1. Species Surveys and Habitat Assessment

Knowledge of the biodiversity and their current status is vital to the effective implementation of a management plan. From previous studies, the island is known to hold a diverse array of flora and fauna, including 11 species of primates, the pygmy hippo and a good list of avifauna some of which are threatened. However, the information is outdated because most of the data was generated 20 to 30 years ago. At the moment, no updated data is available on the biodiversity of the island except *ad hoc* surveys done on specific biodiversity issues and list produced by some tourists who have visited the island.

Actions required

Biodiversity assessment is required for indicator species such as the following:

- The diversity, structure and distribution of the vegetation
- Large mammals – especially all primates and pygmy hippo and their distribution across the island;
- Birds – all species and their distribution across the island;
- General plant list – especially the distribution of threatened species;
- Lower plants – particularly orchids and grasses in wet environments.

6.1.2. Ecological and Behavioral Research

Tiwai Island is already known globally as an important site for research on tropical rainforest ecology and animal behavior. The diurnal primates and the pygmy hippo are among the most studied wildlife to-date. The foundation for this recognition was laid down during the "golden age" of Tiwai Island, when a dedicated Field Research Station and a 50 km trail system were established for research on primate ecology and behavior. The research station has been fully refurbished and upgraded, thanks to a generous support from the US Centers for Disease Control through Njala University. However, while the trail systems still exist, it is no longer in adequate

use and is poorly maintained. In order to attract researchers, there is a need to re-open and maintain the trail systems.

Actions Required

- To re-establish and strengthen ecological and behavioral research, the following action is required
- Clear all trails and ensure the grid system labels are appropriately restored
- Recruit and designate full-time caretaker(s) for the Field Research Station
- Update and widely publicize the Field Research Station Rules and Regulations for Researchers
- Explore the possibility of retrieving data from expatriates who did research on Tiwai
- Explore long-term research partnerships with various institutions around the world

6.2 Identifying Biodiversity Management Units

The Tiwai Island vegetation is broadly homogeneous, mainly comprising close canopy moist forest. However, the island has other minor vegetation elements that must be considered within a broader biodiversity management, because these potentially contain flora and fauna that have not been recorded in previous surveys because their habitats have been overlooked. Data from surveys in other sites in Sierra Leone shows that new species of flora and fauna are still being discovered (Weber et al., 2019; Monadjem, 2011; Cheek and Lebbie, 2018). Such new records for the country justify the need for surveys and conservation work in these apparently less studied zones, especially for an island ecosystem.

Zonation is an option that would allow specific management objectives to be implemented to enhance the conservation needs of a variety of habitats and species that may not be easily recognized either because they are being overlooked or that no proper scientific assessment has been done to ascertain their content and diversity. For the purpose of ensuring that this co-management plan holistically addresses the conservation needs of species and ecosystems, a number of steps outlined below should be implemented during the period of this co-management plan.

Actions required

- Identify and demarcate areas distinct habitats based on different vegetation types and/or topographic features. These habitats may include, but not limited to:
    - Raphia swamps;
    - Flooded grasslands;
    - Riparian habitats
- Conduct surveys in the delineated areas to document flora and fauna.
- Based on survey data and assessment of the conditions of specific vegetation or habitat types, design the appropriate conservation actions for such vegetation or habitat.

SECTION VII - MANAGEMENT OPTIONS FOR INVESTMENT AND SOCIO-ECONOMIC ENHANCEMENT

7.1 Current Livelihood Resources and Uses Analysis

Historic and current economic base of the Tiwai Island is primarily agrarian based, as a large proportion of the local communities depend on subsistent bush-fallow cultivation for their livelihood. The key agricultural products are rice, cassava, cocoa, oil palm and cola nuts. Much of the rice and cassava are consumed locally, whilst the cocoa is dried and preserved for sale to local agents and business people who collect for export.

Cola nuts *Cola nitida* is harvested from the community forest and sold to local business people. Some of the cola nuts are also sold to Carma Cola (a UK based company), who use the cola nut extract to produce a Cola drink that is sold at a high price in the UK and some proportion of the profit is distributed to the Tiwai Community Committee (TCC) The returns from Carma Cola's investment and the impact it is creating in the lives of the local people, through direct cash payment is significant. However, there is still a need to establish how the influence of Carma Cola on the lives of the people can be translated into tangible and sustainable conservation benefit for Tiwai Island and for people who are not part of the TCC.

A good number of the local residents were hunters, but after the declaration of the island as a Game Sanctuary (where hunting is strictly prohibited) and with the general ban on gun ownership, hunting activity has declined considerably. There are reports of gun shots on the Island and shotgun cartridges are found from time-to-time. Some hunting is blamed on marauding hunters purportedly from outside the area, but this is mainly done under cover, because of the recognition by the communities of the regulations that exist and the consequences of being caught.

Some local prospecting for diamonds is on-going at a small scale along the river, some of which occur in close proximity to Tiwai Island. However, due to strong enforcement of the regulations governing the sanctuary, the threat from mining has been keep at a comparatively minimal scale. It should be noted that mining around the island is based on trial and error, implicitly not economically viable and so many people have been discouraged from involving in the activity.

7.2 Current and potential alternative sources of livelihood

Apart from the economic resources from the natural environment, there are virtually no alternative sources of livelihood for the local communities. Employment opportunities are few and far between. The only source of employment is that provided by TIAC, but only a few local people are actually employed as workers in various departments at the sanctuary's eco-tourism facilities. Income from the few employment opportunities available is augmented by direct cash payments from two main sources:

(i) TIAC, through the distribution of the surplus (profit) generated by the visitors
(ii) TIAC through donations and funds obtained from charitable organizations;
(iii) Carma Cola, from profit accrued through the sale of the special Coca Cola product made from cola nuts.

Potential sources, based on interviews and direst observations include the following:

(i) Marketing and sale of product brands of Carma Cola (coco cola drink) and cocoa products (chocolate and chocolate drinks), if the required technology is introduced and developed.
(ii) The use of rattan and raffia palms to create crafts and traditional implements could be further developed.
(iii) Production of non-timber products such as mushrooms and medicinal herbs in a sustainable way on Tiwai Island by local communities.

7.3 Value Chain Analysis and Options

Value chain processes are vital in enhancing the local economy. Value change refers to the full range of activities that are required to bring a product (or a service) from conception through the different phase of production to delivery, to the final stage consumer and disposal after final use (Porter, 1985). This is consistent with the general notion that if raw materials are converted into finished products, the economic gains usually multiply. There are many examples of value chain processes in natural resources management that have proven profitability and local development potential in many developing economies. The conversion of cola nuts by Carma Cola into a desirable coco cola drink is a typical example of how a simple and easily raw material from the forest can bring significant economic benefit, if transformed into a valuable product. The following steps can be taken to implement a value chain process for the benefit of the Tiwai Island and surrounding communities:

- Conduct a value chain mapping, which will make obvious the flow of certain products from conception to end consumer through various actors;
- Identify the different chain actors involved in the value change system and understand their roles and linkages;
- Identify what resources can potentially be subjected to value chain and value addition processes and what their potential uses and target consumers could be;
- Identify the missing links in the value chain and assess how such missing links could be addressed;
- Assess the technological and innovative inputs required to improve the value of products, which will potentially attract more consumers;
- Assess how addressing the missing links and the technological and innovative inputs could improve the marketability of products and enhance the local economy.

Below are few value chain potentials in and around the Tiwai Island that can be harnessed to enhance the local economy:

- Craft work using rattan that can be harvested from the upland and gallery forests along the river. If well-made and well-fashioned, these craft works (chairs, tables and general furniture), a capable of attracting much higher prices.
- Carma Cola should embark on promoting their products to other western countries and even in Sierra Leone and West Africa.
- Cacao and coffee can be processed locally (the technological requirement not too expensive) to produce Tiwai Island varieties for sale to visitors and to other customers in Sierra Leone.
- Oil palm production can be improved upon through investment of intermediate technology into the production process. A manually operated technology introduced by USAID in Liberia has a proven 100% increase in productivity per unit quantity of input compared to the archaic traditional pit method being used at present. This technology or its equivalent is already being used in Sierra Leone and so can easily be accessed and utilized.

7.4 Sustainable use mechanisms and options

Sustainability in resource use is vital to the implementation and success of the co-management plan. The primary purpose of the co-management plan is to protect the Tiwai Island forest, its wildlife and landscape through collaborative action between local communities and other key stakeholders. The island's genetic resources cannot be exploited because of the legislative provision and regulations that applies to a Wildlife Sanctuary in the 1972 Wildlife Conservation Act. However, there are optional resources (including non-timber forest products) within and around the island which can be exploited without jeopardizing the ecological integrity of the island. These resources include the following:

- Rattan and raffia– used for the manufacture of crafts and furniture
- Fish – a necessary source of protein for the local communities, sourced from the river and potentially from aquaculture mechanisms (fish farms).
- Edible mushrooms – these can be identified and commercial production experimented.
- Honey production – through beekeeping ventures, Tiwai honey can be produced, branded and sold to tourists and supermarkets in the major cities in the country.

7.5 Traditional knowledge and intellectual property

The potential for the use of traditional knowledge remains pretty much untapped in and around the environs of Tiwai Island area. No published information exists on traditional knowledge on Tiwai, although there may be some data arising from *ad hoc* research by Njala University. The consultations revealed that there is a wealth of local knowledge among each of the target

categories in the focus group in terms of plant species and the wildlife of Tiwai Island. This knowledge base only requires some further training to enhance individuals within the local communities to engage in research, monitoring, and in tour guiding.

Seeking, documenting and applying traditional knowledge is consistent with Article 12 (Traditional Knowledge associated with Genetic Resources) of the Nagoya Protocol (Access and Benefit Sharing), to which Sierra Leone is a member. There is a good potential for intellectual property from genetic resources, especially in the area of plant and animal products (parts and extracts) used in traditional medicine, but a more systematic approach should be adopted to get the best out of it.

Actions required

- Document all traditional knowledge on historic and current resource use among the Tiwai Island communities.
- Establish collaboration with scientific institutions to identify and tap potential substances that may be useful for medicine and other purposes.
- Identify which traditional resource use is of socio-economic benefit to the local communities;
- Identify and assess which of the beneficial socio-economic activities can be harnessed and improved upon to enhance business and livelihoods in the area.

7.6 Land tenure and customary rights in relation to resource access, benefits and conservation

Land tenure at Tiwai Island and environs is based on the common and widely known system that applies to the provinces of Sierra Leone. According to Renner-Thomas (2010), land in the provinces is owned by the people and kept in trust by the traditional leaders (the chiefs). However, areas of sensitive conservation interest can be handed over the government to be managed as a reserve, through consultations and agreement signed with the traditional leaders. As a Wildlife Sanctuary, Tiwai Island is prohibited from any form of exploitation in accordance with the legal and policy framework outlined in Subsection III. However, as per legal provision, certain activities not inimical to the ecological integrity of the sanctuary may be allowed, especially if there have scientific and economic benefits to biodiversity and the local communities, respectively.

Information obtained from the consultations indicate that most of the current young generation do not know about what is contained in the agreement that was signed with the traditional leaders that led to the declaration of Tiwai Island as a Wildlife Sanctuary. In fact, because of their ignorance about the legal status of the Tiwai, some sections of the people threatened to willfully encroach

into the island for agriculture, hunting and mining if their concerns are not addressed. In order to enhance the effective implementation of the co-management plan in the midst of the concerns by the local communities, actions must capture a range of issues outlined in the box below.

Actions required

- Revisit the agreements for the establishment of the sanctuary with the aim of improving on the protection status of the island.
- Hold a training and sensitization workshop for young people in the local communities to help them understand the agreement that was signed by their predecessors, which was geared towards the conservation of the biodiversity of the island.
- Raise awareness through community meetings, radio announcements, signposts and posters about the legal status of the Tiwai Island Wildlife Sanctuary.
- Identify pro-conservation cultural rights of the local communities, which they use the Island for and how these can be incorporated into the management of the Island.

7.7 Ecotourism and Visitor Management

Ecotourism is the key driver of sustainable management of the Tiwai Island Wildlife Sanctuary. According to TIAC records, visitor numbers are increasing gradually, as national and international awareness about the island tourism attraction increases. Contrary to what obtained a generation ago, many tourists visiting tropical countries nowadays are attracted to the nature (biophysical features and wildlife), rather than hotel and beach tourism. Thus, in recent times many tourists are inclined to visit sites with unique and attractive wildlife and enjoy the natural landscape. These include enthusiastic birdwatchers, general wildlife chasers and nature lovers. There is also a possible rising trend of tourism to the island, especially for the fact that the Tiwai Island has recently been documented as one of the places in Sierra Leone with high touristic potentials, thus increasing the profile of the island and the chances for more visitors to the island.

Tiwai Island is known to have a running ecotourism programme, but there is much potential for improvement, based on anecdotal information from many tourists to the island, local wildlife enthusiasts, local scientists, local communities and information from interviews with key informants. The key issues that must be considered in any quest to develop the ecotourism potential of the island is the need to create an optimum balance between commerce and preservation aspect of ecotourism. It would make no conservation sense if the ecotourism investment would cause a degradation of the ecological condition of the island. Therefore, implementing management objectives for ecotourism, care must be taken to ensure that development in the sector does not adversely affect the biodiversity and ecological integrity of the island. Ecotourism management options should include, but not limited to activities outlined below that would enhance income, but at the same time, maintain the ecological health and ecosystem services of the island.

Actions required.

- Clearly demarcate locations in and around the island where tourists can visit. Measures should be put in place to ensure that these locations are safe and conducive for ecotourism activities.
- The transects (trails) system is maintained and closed sections re-opened. The nature trail improved and extended.
- Construct hides and platforms in locations were shy and delicate species use and ensure that these facilities are always maintained in good condition, by the use of labour within local communities.
- Construct additional facilities on the island to cater for increasing visitors number to the island in the next couple of years
- In order to guard against the effect of increased tourism activities into the island, the management should seek for potential investors or project ventures into off-island hotel and guest house facilities equivalent to the standard within the island.
- Carry out proper training of local community youths as tour guides, house keepers, chefs and cooks to be able to effectively offer standard international services to tourists.
- Redevelop tourism-related activities that were undertaken before the war, such as swimming competition. Other innovative programs can be introduced such as boating.

SECTION VIII - DEVELOPING AND MAINTAINING PROPER AND FUNCTIONAL COMMUNITY RELATION IN THE MANAGEMENT OF TIWAI ISLAND

8.1 The Tiwai Island Communities

The Tiwai Island Wildlife Sanctuary is surrounded by eight communities from two chiefdoms Barri and Koya in the Pujehun and Kenema Districts respectively, as given in the box below. These communities all speak a common language, which is ***Mende*** and practice the same culture and traditions and so they understand each other well with a common means of communications. The communities have manageable population sizes and coupled with common language, there is high level of cohesiveness as virtually everybody seems to know everyone else in these communities. The population is relatively young and most of the people are below 25 years of age, meaning that they are within the actively working age category.

The main source of income and livelihood is agriculture and employment from other sectors is virtually non-existent, except for a couple of forest or wildlife guards posted to the area by the Forestry Division. Employment from tourism operations on Tiwai Island is dependent on need. This implies that the formal employment rate is very low in these communities and apart from agriculture livelihood resources are few and far between. This implies that all programmes and projects within the Tiwai Island and surrounding communities must have components that focus on community development and livelihood enhancement.

8.2 Analysis of Issues from the Consultations with the Communities

It was clear from the consultations that all the representatives of the local communities were aware of the operations of TIAC. They were also appreciative of the effort of TIAC to maintain the status of Tiwai Island and the international profile that has been built around the island. The local communities recognised the importance of conserving Tiwai Island and the ecosystem service and existential benefits it accords to the area and surrounding communities. They admitted that without management of the island by TIAC, the island's ecosystem would have been degraded or even decimated through farming, poaching and mining for diamonds and so the benefit being enjoyed by the local communities would have been lost. However, the grievances and discontent they expressed were mainly about the seeming inadequate transparency and accountability in the operations of TIAC, which could be addressed through the following recommendations:

- The operations of TIAC should be inclusive with strong community participation and should be characterized by level of transparency, accountability and trust among the local communities.
- There should be more frequent meetings, to which all members and partners should be given enough prior notice, including the community representatives. The presence of local

community representative in meetings is very important in disseminating information and updates to the communities on the operations of TIAC, including job availability, planning community engagements and the distribution of resources and finance.

- The communities recognise the legal protection of the island as a Wildlife Sanctuary as declared in 1985 and do anticipate greater protection with greater roles played by the local authorities and the people themselves.
- Government should engage and train the youths and young men from the local communities, in to serve as ranger, in order to ensure greater effectiveness in the protection of wildlife in and around the island.
- Engage local community people in different forms of non-skilled labour on the island, including brushing of the trails. Many more such opportunities may exist on the island, especially after the construction of the research and dormitory facilities for which the local young people want to be involved.
- The composition of the future management structure of the Island should be more inclusive in terms of community representation and other influential stakeholders.

8.3 Involvement of the Local Communities in Administration and Management of the Island

One key issue that emanated from the consultations is the ineffective representation of the communities on the administration and management of the Tiwai Island. According to TIAC, this came about as a result of decline in the activities of the Committee in the past five to ten years due mainly to funding constraints. When adequate funds were available, TIAC was very effective and meetings were held regularly with full involvement of the local community representatives, including the paramount chiefs.

The SWOT Analysis given under Subsection IV of this co-management plan outlines potentials within the local communities that can be harnessed and developed to enhance conservation and livelihoods, but also gives areas that should be addressed such that the gains to be made are not jeopardized. There are clear indications that the skills level within the local communities to implement the co-management plan is low and requires serious inputs in terms of training at various levels. The level of academic education within the local communities is also observed to be low as there are only few secondary and tertiary education graduates, few primary schools, but no secondary schools. Children who may not be able to travel to other places to attend secondary school tend to drop out of school. Some intervention through the provision of scholarship by TIAC and Carma Cola is helping the situation, but this is inadequate and some strategic steps are required to roll out more education opportunities to children and youths from the area.

From the consultations, it was clear that the young people want to be trained in various skills as a means of enhancing their participation in the Tiwai Island management and tapping on the inherent potential for livelihood enhancement in the area. There are many possible areas of training that can be rolled out to the young people in the communities that would translate into

tangible effect on the conservation of the island's biodiversity directly and indirectly. If the relevant training is implemented, it would improve the capacity of the local communities and in effect enhance their chances for gainful employment and reduced the pressure on the resources from the natural environment.

Actions required

- Conduct a current capacity assessment of all local communities associated with the Tiwai Management;
- Carry out a capacity needs assessment of the local communities and draw up a capacity development plan;
- Facilitate the establishment of at least two more primary schools and improve on the education delivery in schools, particularly the two secondary schools in the local communities
- Establish an adult literacy and skills training programme specifically targeting the Tiwai communities.
- Operate an inclusive, transparent and accountable payment and finance system for tourism activities on the island based on a signed MoU with local communities.
- Seek funding for the training in and development of locally-based tourism-related enterprises such as craft, gara cloth production and vegetable gardening.
- The interest and participation of local women should be prioritized where appropriate, whenever a project/programme/activity relating to the management of Tiwai Island is being organized or implemented.
- Based on the 2008 Local Content Policy of Government:
    - Ensure that all unskilled labour required for the operation of the Tiwai Island be tapped from the local communities.
    - The first choice for skilled labour should be offered to qualified local applicants; except in situation where the requisite qualification could not be found among the local people.

8.4 Proposed New Management Committee

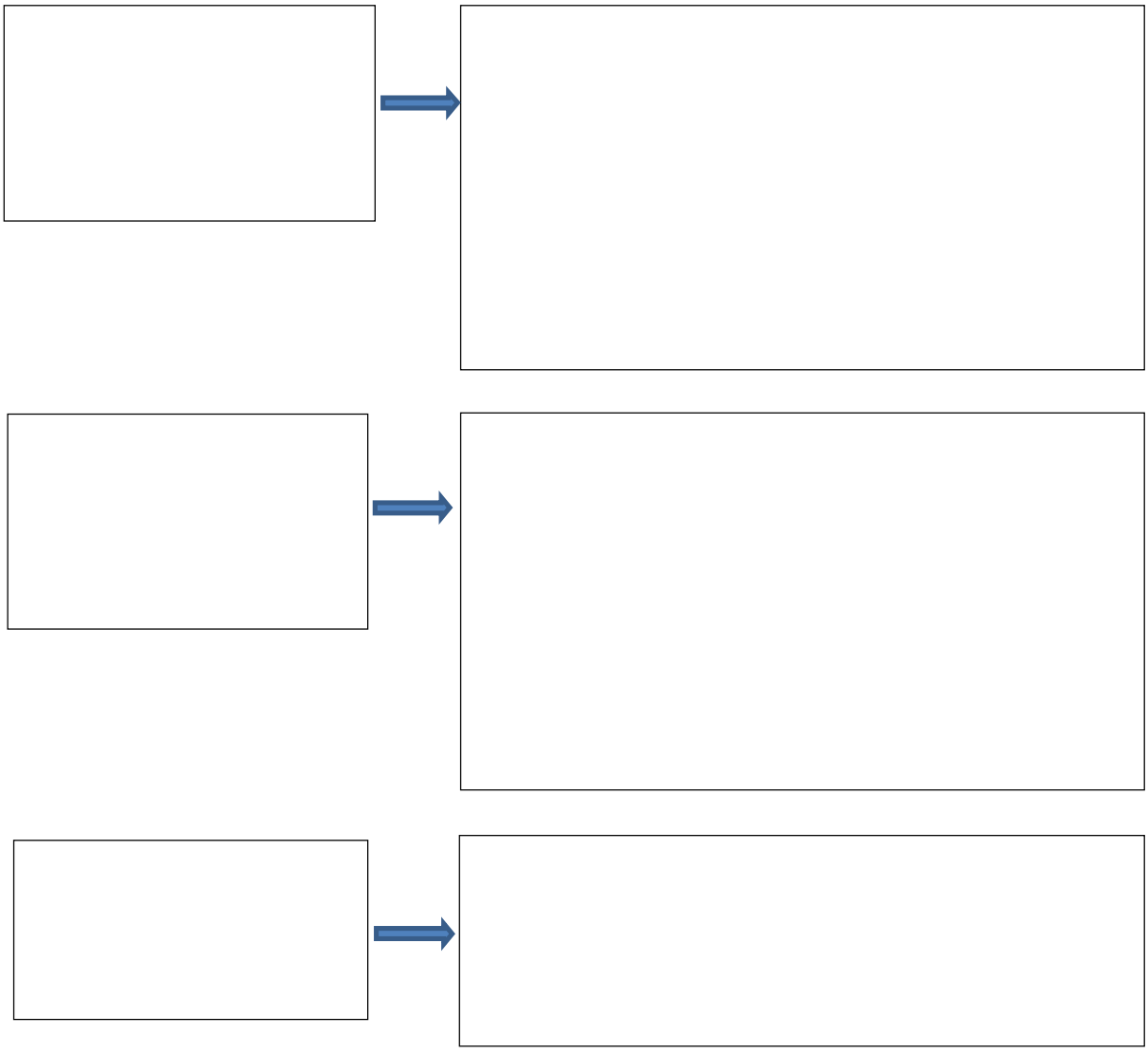
From analyses of stakeholders' current and potential roles in the management of the Tiwai Island Wildlife Sanctuary, and the views expressed during the wide-range of consultations, the future management committee need not be radically different from TIAC, but down-sized, robust and functional. It could possibly adopt a different structure and nomenclature. The main reasons are:

1. Two key members on TIAC i.e. EFA and Njala University (the main drivers) are the most experienced and committed partners who have been largely responsible for mobilizing the financial and technical resources, as well as championing the efforts to revamp biological research and ecotourism on the Island since 2000. Tiwai Island is now one of the most popular and liked destinations for community-led ecotourism in Sierra Leone, thanks to

EFA's and Njala University's continued support for and promotion of biodiversity conservation on the Island.

2. EFA and Njala University have over the years, partnered with the local communities, international organizations and relevant government agencies, to ensure that the sanctuary thrives and its host communities benefit from the investments and interventions of the various overseas partners, including private sector entities and educational institutions.

The proposed new committee has therefore been proffered and structured in a manner that reflects the level of stakeholders' potential inputs and impacts on the management of the island. The list provided in the boxes below represents an inclusive, but more result-oriented structure that would effectively promote the primary goal of the co-management plan and the overall purpose of the Tiwai Island Wildlife Sanctuary. Two categories of stakeholders have been identified as follows:



(i) **The primary stakeholders** – they will form the core of the management committee, should always attend meetings and have equal voting rights on policies and decision-making issues. The running of day-to-day management affairs of the island should be the core function of the primary stakeholders. Details of such core functions will be decided at the meetings of the management committee. The meeting of the Committee will be chaired by the PC of

(ii) **The secondary stakeholders** – these are not core members of the management committee, but can be co-opted or invited to meetings as and when necessary). They do not have any voting rights, but are important in providing policy direction and strategic oversight to the management of the island.

The proposed concept is to ensure that activities of the committee are primarily geared towards achieving the objectives of the management plan and to ensure proper management of funds and other resources and avoid wastage. The primary stakeholders form the core management team, whose nomenclature would be determined at the inaugural meeting of the co-management committee. All secondary stakeholders should have access to all relevant reports, including project and programmes narrative and financial reports, annual activity reports and audit reports. As indicated in the Register of Stakeholders (Subsection 4.1), other prospective or potential stakeholders may be invited to meetings as and when necessary. They could also be given the opportunity to access specific reports for specific purposes that are of strategic interest to the management of Tiwai Island.

SECTION IX - CROSS-CUTTING THEMES

9.1 Monitoring and Evaluation

The monitoring and evaluation (M&E) process is very important if the implementation of the Tiwai Island Co-Management Plan is to be successful. This M&E process could be implemented at two levels; (i) at the level of the administrative and management level and (ii) at the ecological level. This justifies the need for the development of a Monitoring and Evaluation Plan which should contains easily comprehendible and applicable, but robust indicators that are can be monitored to assess whether or not the objectives of the co-management plan are being achieved. The data generated during the monitoring process can then be used to evaluate progress in the implementation of the plan, the result of which will inform implementers and stakeholders (particularly the new management committee) about progress, identify challenges and take the necessary action to address those challenges.

Monitoring at the administrative and management levels should entail regular records and updates on activities undertaken by the management committee and how these activities are fulfilling the objectives of the co-management plan. The ecological monitoring, which requires a lot of inputs both human and material, should be undertaken on a regular (2 to 3 years) or ad hoc basis, depending on the need and should be consistent with any research that the stakeholders or any outsider may want to undertake. It should also be a policy to incorporate Sierra Leone scientists and local people in any research or surveys outsiders may intend to undertake in the Tiwai Island. This is to ensure that all data generated from surveys or research, remain in-country and local content is considered in any benefits and intellectual property emanating from such research. The M&E process will also ensure that there is compliance to national and international policies and regulatory mechanisms that pertains the conservation of the biodiversity of Tiwai Island.

- A Monitoring Plan should be developed through facilitation by the core committee members at the start of the implementation of the co-management plan.
- A monitoring schedule must be agreed among key stakeholder and monitoring sheets formulated.
- Monitoring should be carried out on a regular basis and report produced at least once every quarter.
- Progress in the implementation of the co-management plan should be evaluated once a year, based on the quarterly monitoring reports and annual reports produced and widely distributed.
- A regular annual auditing of the financial transactions of Tiwai Island management should be done as a component of the M&E system.
- A Tiwai Island Project or Programme Officer should be appointed with an assistant from among the local communities who will lead the M&E process and be responsible for producing the reports.

- The evaluation process should be participatory and transparent so that all parties are accountable to the outcomes.
- Discussion on the observations and results of the monitoring and evaluation process must constitute a vital component of the internal meetings and monthly meetings.
- A holistic M&E report should be produced at the end of the operational calendar, incorporating all component of the monitoring process.

9.2 Internal Monitoring of the Administration of the Co-management Plan

Internal meetings are necessary to provide regular update on the status and progress in the implementation of the co-management plan. The following meetings are recommended:

- On-site meetings should be held once every month between the Project or Programme Manager and the management committee to review daily progress, financial intake and work plans.
- Meetings of the management committee should be held once every quarter and should include all major stakeholders; minor stakeholders could be invited to the meeting based on their relevance and availability.
- A periodic programme or project review meeting for the implementation of the co-management plan should be held every three years. It should entail the cataloguing of the successes, lessons learnt and challenges of the implementation process and could also include a re-engineering of some components of the plan, if the challenges would jeopardise the progress in the implementation.
- In internal financial auditing mechanism should be set up and issues of financial management and reporting should form an important agenda item in each of the meetings recommended.

9.3 Ecological and Environmental Monitoring

Ecological monitoring should focus mainly on indicator flora and fauna, because it would be impossible to cover all taxa. The key issue for ecological monitoring is the cost associated with personnel and other resources required to carry out a thorough process. Therefore, it is necessary for the management committee to encourage ad hoc surveys or research by people who may be interested in any species, taxa or ecological themes. It would definitely be necessary that the management committee seeks funding for more thorough ecological monitoring at least once every two to three years, which will be useful to inform the three-year periodic review of the implementation of the co-management plan.

9.4 Grievance Redress Mechanism

Grievances would always occur as long as there is interaction among people for a common interest, especially people whose way of life are driven by certain culture and traditions. The issue of grievance over one thing or the other from the local communities on things relating to the management of Tiwai Island was very prominent during the community consultations. Based on responses from the local people, some of their grievances date back to very day the Tiwai Island was declared as a wildlife sanctuary. This grievance redress mechanism should ensure that the co-management has an open channeled to listen to complaints and find amicable solutions to them.

Complaints can come in any form and from any person or groups of persons. Two main sources of complaints are the local communities and the workers. Complaints can directly be addressed by the intervention of the management committee or at the level of the local authorities, especially those that relate to issues of resource exploitation and use. The mechanism through which such complaints can be channeled would depend on the nature of the complaints, the location of the incidence and the urgency of the expected response.

Key actions to effective address complaints and community relations:

- A hierarchical channel of complaints should be published and distributed to relevant stakeholders and followed in the event of a complaint.
- Complaint forms should be distributed to every town/village chief.
- The complaint form should be filled by the complainant and submitted to the Project / Programme Officer.
- Once received, all complaints will be channeled through Project / Programme Officer, to the Management Committee.
- A complaint register should be kept by the Project or Programme Manager and updated as events happen.
- As far as practicable, all complaints must be investigated by the management committee or a small committee chosen by the management committee.
- A report on the incidence being reported by the complainant produced with recommendation on possible redress mechanism.
- A record of the mechanisms through which complaints are addressed must be kept and updated in order to learn from the experiences and lessons of the process.
- Where complaint redress mechanism involves some sort of compensation or the other, these should be published internally and be transparent.
- The procedure for investigating complaints and responding will be explained to the complainant at the time the complaint is filed.
- The complainant will be informed within a week of the outcome of the investigations and other action taken as regards the investigation.
- The internal redress mechanism shall not be used as a means of evading local or national legal mechanisms, if a perpetrator is heavily culpable.

- Where a complaint has to do with criminal offences, such complaint shall be referred to the police, if the internal redress mechanism is not practicable.

9.5 Employment Opportunities and Gender Issues

The project operations are likely to create pressure from the local communities and possibly migrant workers seeking job opportunities. This pressure has been seen to lead to discontent and conflicts in other projects around the country. Women have demonstrated a proportionate degree of effectiveness any friendly work environment. Premium must be given to equal employment opportunities for all, irrespective of gender, but where relevant, women should be given preference.

Key actions

i) Employment opportunities on the Tiwai Island should take into consideration the Local Content Policy of the Government of Sierra Leone, but not jeopardizing qualification and experience as the key requirements for technical/professional jobs.
ii) Preference must be given to people from the local communities for job opportunities; except in situations where no suitably qualified and experienced local person is available.
iii) Opportunities will be created for the employment of more community female workers.
iv) In the area of job opportunities for desk assignments, preference should be given to the female community applicants except in a case where community-based applicants are not qualified for the job.

9.6 Recommendations

The current over-reliance of the Tiwai Island Administrative Committee on EFA and the two Paramount Chiefs, and the Department of Biological Science of Njala University, is unsustainable and a revised management structure is required. Recommendations are grouped under ***"management and finances"*** and ***"biodiversity and conservation".***

Management and Finances

The demand for transport and DSA by nominated representatives of local councils and national government [ministries, agencies and departments] is a major reason for their low level of attendance and participation in TIAC meetings in recent years; providing resources from the tourist income would mean that there would be no surplus to distribute to the surrounding communities. The main concerns raised by the local communities, are about what money is raised and what happens to it; this means that a revitalised or reinvigorated TIAC requires much more

local participation and this in turn means training local representatives in skills such as book-keeping so that they can validate and audit income and expenditure.

Based on our assessment and the various consultations, we recommend the following:

- A successor to the current TIAC should develop a detailed MoU (memorandum of understanding) with the communities clearly outlining roles and responsibilities of all parties involved.
- A successor to TIAC should develop a detailed MoU with each of the secondary stakeholders (including members of TIAC) as to their specific roles and responsibilities.
- A successor to TIAC should maintain closer relationships and lines-of-communication with traditional authorities.
- Undertake a training needs assessment and designing schemes to
  (a) Train at least 2 people in each community (one male and one female) on basic book-keeping so that they can understand what happens to the visitor income
  (b) Train at least 2 people in each community (one male and one female) in providing basic hospitality services to help communities understand the needs of the visitors
- The business plan should include a detailed;
  (a) Market assessment
  (b) Plan to increase visitor numbers
  (c) Plan to increase the diversity of visitor experiences
  (d) Plan to develop associated livelihood activities such as;
    (i) Crafts (need to be small and high value)
    (ii) Off-Island accommodation and activities
    (iii) Food, e.g. sale of local coffee and honey

Biodiversity and Conservation

The local communities fully recognised the importance of conserving Tiwai Island and the ecosystem service it provides. They admitted that without the protection of the island the ecosystem would have been degraded through farming, poaching and mining for diamonds. There is no active management of the vegetation on the Island. In the long term it may be necessary to interfere with natural processes in order to protect particularly vulnerable species, but our knowledge of the ecology of the Island is too under-developed to undertake active management at the moment.

Based on our consultations, we recommend that;

a) Two people in each community (one male and one female) are trained in basic biodiversity and conservation management for forest and wildlife rangers.
b) Better communication is encouraged between researchers and TIAC
c) A comprehensive biodiversity assessment of the Island is undertaken, with particular emphasis on the heterogeneity of the forest.

Sustainable financing mechanism

The issue of sustainability in the operations of the Tiwai Island has been discussed lengthily in various fora and during the consultations. The inability by the islands management to obtain adequate funding to sustain the operations of the sanctuary during crises periods has been a key challenge. It is obvious that a mechanism be set up to raise funds that would be used to cater for basic functions and maintenance cost whenever the island is affected by a decline or complete cessation of visits, which is the main source of finance. The core management committee in consultation with other stakeholders should assess various options that have been recommended during the consultation, including (i) A Trust Fund; (ii) An Endowment Fund; and (iii) A Bank Deposit such as Fixed Deposit or Treasury Bond or Bearer Bond.

The CTF set up by the Government of Sierra Leone is charged with the responsibility of raising funds for conservation of protected areas. During the consultations, the CTF indicated its commitment to support the establishment of a Trust Fund for the Tiwai Island as it deems it as a responsibility of the Agency. The core management committee should consult with the CTF on the options that can potentially be explored to achieve such a venture. Also, one key preoccupation of the core management team is fundraising through various national and international channels that would culminate into establishing a sustainable financing mechanism for the Tiwai Island.

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APPENDIX I - PHASE 1, CONSULTATIONS WITH THE EIGHT HOST COMMUNITIES

DEVELOPMENT OF A MANAGEMENT PLAN FOR TIWAI ISLAND:

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Draft 0.4, 13th October 2019

BACKGROUND

Tiwai Island is a large[1] (12 sq km) island in the Moa River. The river forms the boundary between the Eastern and Southern Provinces, Kenema and Pujehun Districts. There is no permanent settlement on the Island and ownership has been shared between two Chiefdoms; Barri (in Pujehun District) and Koya (in Kenema District) for many years. This sharing of control between Chiefdoms is believed to be unique in Sierra Leone. Eight communities (5 in Barri and 3 in Koya) are considered to be the "host" communities, the more southerly communities have access to the islands downstream of Tiwai that are also uninhabited but economically exploited.

The rich biodiversity of Tiwai Island was identified almost 40 years ago and the host communities have been encouraged and supported in preserving this by a variety of organisations and in a variety of ways. A very brief time-line is provided below:

Date	Activity
Mid -1970	The biodiversity value of Tiwai is identified by researchers based at Njala University. A very dense and diverse primate fauna was observed[2]; other West African endemics such as the pygmy hippo were also proved to be present.
Late -1970s	Discussions start with the two Paramount Chiefs, especially V.K. Magona the VIth of Barri about reducing hunting and other exploitation on the Island
1987	Tiwai Island is given legal protection as a "Game Sanctuary"
Late- 1980s	The "golden age" of Tiwai Reserve, two American Universities, Hunter College and the University of Miami provide significant support to researchers on the Island (resulting in several ground-breaking papers led by Oates, Whitesides, Fimbel etc). A Research Centre is established by Njala University and a Tourist Camp established with American funds (although the number of tourists unknown).
1989	A draft management plan is written by a Peace Corp volunteer using the American style of zoning. The management plan envisages limited economic exploitation (farming, logging etc) under the control of a "Supervisor". The extent to which the full plan (~100 pages) was discussed with the communities is unclear, the plan was never formally adopted and fortunately farming and logging did not restart.
1980's	Documentary "Island of Apes" produced for Anglia TV (UK)
1991-2001	Sierra Leone Civil War. Researchers and Peace Corp volunteers were evacuated very early on in the war as Tiwai is close to where the insurgency started. Very high levels of poaching occurred during this period. Minimal financial support was provided from outside the area through the Department of Forestry.
2000	First visit to Tiwai by staff from the Environmental Foundation for Africa (EFA).
2002	Re-establishment of TIAC (Tiwai Island Administrative Council) with input from line Ministries (Forestry, Tourism), Local Government (MP's, District Councillors), Traditional

[1] Tiwai means "large" in the local Mende language.

[2] The diurnal primates are: Diana monkey (*Cercopithecus diana*), Black-and-white colobus (*Colobus polykomos*), Red colobus (*Procolobus badius*), Chimpanzee (*Pan troglodytes verus*), Olive colobus (*Procolobus verus*), Sooty mangabey (*Cercocebus atys*), Campbell's monkey (*Cercopithecus campbelli*) and Spot-nosed monkey (*Cercopithecus petauristabuettikoferi*).

	Authorities (Paramount Chiefs), Academics (Njala University) and NGO's (EFA).
2004	Work by Bakarr suggests primates such as Campbell's monkey are now at 10% of their pre-war numbers.
2002-2006	Funds obtained from Critical Ecosystem Partnership Fund (CEPF), UNHCR and Irish Aid are used by EFA, partnering with Njala University, to reconstruct and restore the biological research and ecotourism facilities on the Island, provision of a boat etc. Pre-war funding bodies (i.e. Hunter College and Miami University) appear unable or unwilling to re-establish ties with Sierra Leone.
2006	Official re-launch of Tiwai as an ecotourism destination and site for research
2002-date	Numerous development initiatives are developed and implemented with varying degrees of success and not all are "branded" as being due to TIAC. Examples include; two of the culvert bridges on the road from Potoru – Kambama (funded by GTZ), the school at Kambama (funded from visitor income), Solar power for lighting and charging in all Tiwai Communities and the schools and clinics in their chiefdom headquarters Potoru and Boama (funded by EU). Agricultural development (e.g. Food Security and Economic Development – FoSED – funded by European Union, implemented by EFA and WHH). Eco-tourism development, employment of locals in guiding and supporting tourism, boatmen, construction and maintenance of facilities, cooking for visitors and assisting researchers, etc.
2013-2014	The need for a new management structure is identified; work is undertaken by Environmental Resources Management Foundation, UK on a "pro-bono" basis and an eco-tourism management plan is drafted by an EFA intern. Extensive discussions are undertaken internally and externally, but a number of serious issues remain unresolved.
2014-2015	Ebola crisis. Zero income from visitors. EFA and partners mobilise some resources for the communities (rice and cash).
~2015	By this time attendance and input from most members of TIAC has dwindled, to the extent that EFA and the two paramount Chiefs are the only active members.
2015-2016	Major storm on Tiwai Island causes extensive damage to building and various equipment including solar lighting at the visitor / ecotourism camp. EFA mobilises funds and works with local community to rebuild the structure and restore the services
2017	Major storm causes extensive damage to buildings at Field Research Station. A CDC grant enable Njala University to repair, refurbish and upgrade the facilities at the field research station.
2018-2019	Funds are obtained from USAID, through WABICC, RSPB and Gola National Park to commission consultants to prepare a new management plan Consultants appointed.

DESIGN OF THE CONSULTATIONS

The "call for expressions of interest" envisages a two-stage process of consultation:

- Consultation with the primary stakeholders, that is, the people in the eight host communities
- Consultation with the secondary stakeholders, some of whom have demonstrated a long-term commitment of resources to the Island, others are merely stakeholders "by assertion".

This report highlights the process and findings from the first phase of community consultations and will feed into the development of a management plan for Tiwai Island.

HOST COMMUNITY CONSULTATIONS

Consultations were undertaken in August - September 2019. As this is the height of the rainy season, access to some communities was difficult but all communities were visited. Interviews and discussions were primarily undertaken in Mende (the local vernacular) and to a lesser extent in Krio (the *linga franca*). A small device was used to record all the conversations (with the consent of the respondents), however, these recordings have not been transcribed or translated and only small fragmentary quotes are available.

Consultations consisted of:

- Key informant interviews (40 people, five from each of the eight communities),
- Focus Group Discussions.

"Key informants" were defined as;

- The Town chief / section chief
- Women's Leader/Chairlady
- Youth Leader
- An Elder
- Imam

Note that this definition of a "key informant" does not include the requirement to be knowledgeable about Tiwai or its recent history or to have benefited directly (eg being a guide) or indirectly (eg being given improved seeds through FOSED), or to have been specifically disobliged by any of the external actors over the last ~40 years.

The FGD were well attended and the numbers supplied below.

COMMUNITY	MALE	FEMALE	TOTAL
GEIMA	32	37	69
KAMBAMA	33	08	41
JENE	27	36	63
SARHUN	59	39	98
NIAHUN	52	53	105
MAPOMA	39	39	78
BOMA	24	31	55
SEGBEMA	05	01	06
TOTAL	**271**	**244**	**515**

At the start of the meeting, the consultant explained the purpose of the meeting which was geared towards the development of a management plan for the Tiwai Island Wildlife Sanctuary. Questions were asked by members of the team and later the audience in turn asked questions or made contributions, so that to a large extent the sessions were interactive.

FINDINGS FROM THE INTERVIEWS AND DISCUSSIONS IN THE VARIOUS COMMUNITIES

SECTION 1 - KNOWLEDGE AND AWARENESS OF ACTIVITIES AND OPERATION OF TIWAI ISLAND

Q1.1 Awareness about Tiwai Island Wildlife Sanctuary

The is a high level of general awareness about the existence and operation of the Tiwai Island Wildlife Sanctuary and the role TIAC is playing, but most of the communities expressed their concern over the perceived declining influence of TIAC in the running of Tiwai Island. There is a tendency to assume that TIAC is primarily Mr Tommy Garnet of EFA and so all the blame for things they perceive are not going well, are placed on him rather than on the non-attending members of TIAC. Most of the respondents indicated that they have known about the TIAC initiative since its inception in 2002. For those who were born after it started, they said that they had been aware of it since they were very young.

Most of the elderly people in the communities have visited the island, but they visited when the island was not under any management and was being used for various activities, particularly hunting and farming. Almost all respondents in the communities have visited the island because they wanted to know what was happening or because they were working there in one capacity or the other. Open meetings are held at least once per-year to explain what had happened and where the funds had been spent etc.

Response from the elders in all communities was that "informed prior consent" was obtained during the negotiations for the declaration of Tiwai Island as a Wildlife Sanctuary. As the Sanctuary was legally declared in 1987 many of the younger respondents were not yet born or were too young to take part in the negotiation. In general, there was consensus among communities that they were consulted about the Sanctuary prior to the intervention by government in 1987 and there was a general acceptability of this legal status as a Game Sanctuary, and the terms and conditions of its implementation. However, a significant proportion of the people expressed their dissatisfaction over how activities

were being handled, although some of their perceptions were observed to be based on limited or absence of personal gains rather than a fair reflection of the benefits to the communities as a whole.

Q1.2 Involvement in the activities on the island before and during the Tiwai island Programme

All respondents and communities admitted that before the 1980's the Island was used for farming, hunting, collecting NTFP, logging, fishing and some small-scale mining, but suggested that none of these are going on now in the island. Observation suggest that hunting (poaching) is still a problem and exploratory mining pits occur fairly regularly. Many of the youths said that they have been involved in activities on the Island one way or another; eg: cleaners, patrol guards, cooks, tour guiding, boat operators etc. Many also know other people within their communities who have also been involved and those who are still working on the Island.

Q1.3 Knowledge and perception about TIAC and its management of the island

Most of the respondents know about TIAC. There is a general feeling that TIAC was effective initially, but their operations have declined over the last five years.

A good number of community people reported that they have attended one or more of the meetings called by TIAC (or by Tommy Garnett as most people perceived), whenever there is issue of interest to the community and in a few instances for the purpose of distributing benefits to the communities. The number of meetings organised by TIAC for various purposes is perceived to have declined since the 2014-2015 Ebola crisis.

Most of the communities think TIAC's operations have been good for the island, but a vocal minority have negative perceptions. In two communities (Jene and Geima) there was unanimous agreement that TIAC's operation in the island has been good for the island. In other communities there were mixed opinions and perceptions about the impacts of activities on the island.

Q1.4 The impacts and benefits of the Tiwai Programme to local people and their communities

Most respondents think activities on Tiwai Island have not significantly improved their livelihoods, but some of them acknowledged that they have been directly or indirectly employed by TIAC and are obtaining alternative livelihood opportunities.

It was agreed by many respondents that community projects undertaken by the TIAC have brought benefits to their communities. Some of the community projects mentioned include construction of school classroom block, solar charging station (from which funds were raised for the community), the construction of water well in all communities and the construction of Guest Houses in five communities. However, a few people were disgruntled over the sustainability of some of these projects, because according to them, the solar changing station broke and none of the revenue had been saved for repairs, some water wells need rehabilitation, more schools should have been built by now and more scholarships given to their children.

For most of the respondents, their perception of indirect benefit was misconstrued and so could not give appropriate answers. Some of those who could appreciate what indirect benefits are indicated that the continued existence of the Tiwai Island forest as a result of the intervention of TIAC is good for them. The services that Tiwai Island is bringing to them includes tourism, the provision of seedlings (e.g. cacao) and seed rice through alternative for their farming and the construction of a jetty at Kambama which has enhanced transport to other villages in the Tiwai environs.

A good proportion of the people were positive about the impact of the programme on the state of the island, yet there were some who were dissatisfied about the current state of the island simply because they have limited access to the island. The dissatisfied suggest that more youths should be employed and there should be greater community representation in the management planning of the island through the Tiwai Communities Committee (TCC) and their local chiefs and elders.

Q1.5 Knowledge about the legal status of the Tiwai Island

The general response to the issue of legal protection of the island was that the communities know that it is a protected area under the jurisdiction of the government of Sierra Leone. None of the individual respondent or community consultation refuted or rejected the protected status of the island and they are willing to accept and continue with that arrangement.

FUTURE ENGAGEMENT FOR THE MANAGEMENT OF THE ISLAND

Q2.1 The future of Tiwai Island Advisory Committee

Most of the respondents are of the opinion that TIAC should be transformed or evolved into a more operational entity, mainly involving people within the local communities. Some of the reasons given for the need for transformation of TIAC are as follows:

- should be more inclusive,
- should share more information more regularly,
- should concentrate less on secondary stakeholders in Freetown and more on the local communities.
- Should include local businesses such as Carma Cola and their Tiwai Communities Committee.

Q2.2 Willingness to be involved in the management of the island

All respondents expressed a willingness to be involved in the management of the island; the elders would like to serve as Chairmen and advisors to the activities whilst the women and young people would like to be actively involved as representatives of their respective communities and gender groups.

Q2.3 What needs to be done to create effective management

Unclear.

Q2.4 Things that Tiwai programme needs to do differently to enhance the management of the island

- TIAC or its proposed new form should be inclusive of all interest groups within the communities and other peripheral stakeholders, such as Carma Cola and the TCC. This will ensure that community development could be handled collectively and the impact be spread over all communities.
- Provide more employment opportunities to the young people especially as tour guides, patrol guards and skilled works (masonry, carpentry etc.).
- Sustainable alternative livelihoods should be provided, as compensation for the loss of potential livelihood from the island from farming, hunting and mining.
- Funds meant for community development or any other benefits should be distributed to communities based on their proximity to the island, because some of these communities are not directly connected to Tiwai, such as Niahun and Sahun.
- Access to micro-finance and other opportunities should be part of the community development initiatives, especially for women.

Q2.5 How the communities think they can be involved in the Management of the Island.

- The community should be part and parcel of the management at all levels of the operations of the island, including the advisory community down to the operations committee.
- Community representatives should be at the entrance to the island to monitor and record numbers and payments made by visitors to the island in order to ensure transparency and accountability in the management of the funds.
- The local chiefs or elder should be the key means by which information can be transmitted to their respective communities.
- The communities should be allowed and facilitated to develop and enforce bye-laws to protect the island and deal with any encroachers

Q2.6 How the local community heads should be involved in the management of the island.

The response to this question was consistent across all communities visited. The key points are:

- The community heads would like to be member and/or chairmen of the management committee or subcommittees;
- They would like to be involved in the management of the funds raised from entry fees to the island or any externally funded projects, and decisions on how these funds are utilised.
- Be responsible for managing the funds for maintenance of facilities in and around the island and on setting and paying wages to local employees.
- As custodian of the customs and traditions of the people, the elders should be directly in the development and implementation of bye-laws for the effective protection of the biodiversity of the island.

Q2.7 How the youths of this community should be involved in the management of the island

The youths would also like to be fully involved in the management and day-to-day running of the island because they are the potential law breakers. They want be employed as forest guards and wildlife rangers to be able to earn their livelihoods instead of being involved in illegal activities.

Q2.8 How the women should be involved in the management?

The women would like to be represented in the management committee of the island as a way of ensuring gender representation and that their concerns are addressed, as access to micro-credit facilities and skills training opportunities. The women admitted that they use to house poachers and so for them to be involved in the protection and management of the island they should be employed as cooks, cleaners and even tour-guiders.

Q2.9 How should Government be involved in the management of the island.

Respondents think that government officials, through the Forestry Division should be included in the management team with the key purpose of implementing and enforcing government policies on conservation of wildlife. However, there is a general perception that government officials should not be included in the day-to-day running of the affairs of Tiwai island. Also, government should provide armed security as a means of dissuading potential poachers and encroachers into the island.

Q2.10 The problems and challenges the communities think the TI management could have in future

- Poaching is still a threat to the island, according to most respondents, no matter the mechanisms put in place to protect the island.
- The ownership of the island could be a key problem in future because some communities wish to remove some of the other communities from the group.
- The potential chiefdom dispute that may emerge from issues of ownership and rights to the island by people from the two chiefdoms of Barry and Koya.
- The potential problem posed by TCC for control of the management of Tiwai as a rivalry to TIAC.

Q2.11 How the communities think the problems and challenges could be addressed and what mechanism do you think should be followed.

- The local people should be given rights to arrest and prosecute poachers and encroaches with full support from the police.
- Permanent staff, mainly community people, paid by government as part of the forest and wildlife rangers assigned to the area.
- The issue of the ownership of the island should be resolved on the basis that each chiefdom agrees to work in collaboration with the other, with the primary objective of ensuing that the Tiwai island in conserved for their collective benefit and that of posterity.

GENERAL OBSERVATIONS AND COMMENTS

During the interviews, individual respondents and groups of people were willing to talk about the issues and expressed themselves freely.

It was clear that the people do not know the difference between TIAC and EFA (represented by Tommy Garnett). There is a general perception that Tommy Garnet controls TIAC and does things the way he wants, which may be due to lack of understanding of the roles and responsibilities of the other institutions and individuals that constitute TIAC, and often their non-appearance.

There seems to be some antagonism amongst the communities in the two chiefdoms, as there is still some silent dispute about ownership of the Island. According to some speakers, some of the elders of Barri chiefdom claimed that Tiwai Island lay entirely within Barri not Koya and only the more northerly communities of; Kambama, Niahun, Jene, Sarhun and Boma have rights to the Island. From the discussion it was observed that some of these people, especially local leaders may wrongly perceive that considerable outside influence and money might be flowing coming into Tiwai island management and so want to exclude the other communities from such benefits.

There is also some misgivings about EFA among the local communities. Before the rebel war, Tiwai benefited greatly from "core funding" provided externally, since then activities have been limited to the surplus from the paying visitors. The perception is that there were many more opportunities when core funding existed, and the economic realities of a sustainable self-supporting system are not clearly understood. There is a belief that Jene and Kambama benefit disproportionally from employment opportunities, and that EFA is not offering an equal voice to these other communities and they are excluded in the management structure.

One strong antagonist to the work of TIAC is the chairman and Leader of a newly formed group known as Tiwai Communities' Committee (TCC). This particular antagonist wants the management of Tiwai to be entrusted to himself as leader of TCC, but much of his response were in variance from the facts on the ground. A general observation is that there was inconsistency in the responses by a number of respondents to questions relating to benefits and community participation.

APPENDIX II - PHASE II, CONSULTATIONS REPORT OF FOCUS GROUP DISCUSSION HELD IN BARRI AND KOYA CHIEFDOMS FOR THE DEVELOPMENT OF A CO-MANAGEMENT PLAN FOR TIWAI ISLAND GAME SANCTUARY

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1.0 INTRODUCTION

This report describes the second phase of community consultations geared towards the development of a co-management plan for the Tiwai Island Game Sanctuary (TIGS), and therefore will be included as an addendum to the first report. The first phase was focussed at getting the perspective of each of the eight communities associated with the TIGS, during which individuals within these communities were interviewed followed by collective group consultations with key members at each of the communities. The report has been submitted to TIAC and subsequently to RSPB, the coordinators of the project.

This second phase of consultation was done at the chiefdom level. Two tiers of consultations were held with each of the composite representatives from each of the communities in the two chiefdoms of Koya and Barri, respectively. Firstly, focus group discussions were held for each of the following categories of representatives from each of the communities with chiefdom: (i) the community chiefs and leaders; (ii) the women and (iii) the youths and young people. This was then followed by a collective consultation with all members from all communities in the same chiefdom.

The general observation from these consultations was that the issues that emanated from the first phase of the individual community consultations were consistent with those from the second rounds of consultations. However, though there were a few agitated individuals who attempted to sway the discussions towards personal grievances, the rest of the community representatives were very cooperative and showed great willingness to participate and contribute to the discussion. The contributions were open and frank and effort was made by the consultant and facilitators to diffuse all potentially volatile arguments.

The consultations were held at two locations, respectively, for the following chiefdoms and communities:

Potoru Town: Barri Chiefdom – 23rd October, 2019.

Kambama Town: Koya Chiefdom – 24th October, 2019.

2.0 TIWAI ISLAND GAME SANCTUARY MANAGEMENT: LOCAL COMMUNITY'S PERSPECTIVE ABOUT THE PAST TO PRESENT.

2.1 Awareness of Tiwai Island Wildlife Sanctuary and Operations of TIAC

In each of the consultations with the individual groups and the communities there was a general awareness and acceptability about the operations of the TIWS in the area. There is however some discontent among some of the local people such as: (i) that the agreement that was made with their traditional leaders needs to be reviewed, taking into cognisance current economic situation and other potential players and investors in the running of the island; and (ii) that the island is to be protected against poachers and miners since the island used for wildlife purpose, because as alleged, people are coming from outside the area to poach and mine.

It was clear that every representative of the local communities were aware of the operations of TIAC. There is a general perception that TIAC as managers of the TIWS would have been able to perform well to the satisfaction of the local communities, but for the influence of EFA on TIAC team. From discussions only some individuals within the

local communities share this view, which may have emanated from seeming lack of transparency on how resources and finance have been shared by EFA (representing TIAC). They cited the infrequency meetings in the last several years and that the two community representatives in TIAC were no longer invited to the meetings. According to the local people these two representatives were very instrumental in providing updates to the communities and operations of TIAC, including job availability, planning community engagement and participating in the distribution of resources and finance. Now that TIAC is hardly meeting and community representatives are no longer in touch with them, thus the general suspicion that TIAC, under the influence of EFA is not being transparent accountable in their operations.

There was also a semblance of disagreement among the traditional leaders about the operations of TIAC. Some alleged that TIAC has shifted its focus more to certain communities which has led to inequitable distribution of resources and attention in affected communities. However, the caretaker chief of Barri Chiefdom indicated that he has served as secretary to TIAC and so has been attending the meetings, although he admitted that it has been over five years now since meetings were held. The lack of meetings of TIAC, which should have included local leaders and the respective chiefdom representatives was the key issue raised by the communities over the operations of Committee.

2.2 How the Tiwai Island project affected the livelihood and activities of the communities.

The response from the different community groups to this question was mixed, but the nature of the answers were not diverse. Whilst there is common understanding that the TIWS has brought considerable benefit to their communities, they are still aggrieved about the lack of access to farming on the island and non-compliance with the original promises that was made over compensations to the communities. Some of the benefits cited are as follows:

- provision of solar powered facilities (though now defunct) which was helpful to their children's study and was used to charge their mobile phones;
- Rehabilitation or construction of at least a school, guest house, mosques or palava huts in each of the eight communities, respectively;
- The provision of rice seedlings for some communities.
- Direct cash payments were made every year as proceeds from the tourism on the island, to address other community needs.

2.3 Community's Perception about the current state of Tiwai Island and the direct and indirect benefit of the conservation the island to them and posterity.

The majority of the chiefs, women and youths admitted the importance of conserving Tiwai Island and the ecosystem service and existential benefits it accords to the area and surrounding communities. They also admitted that without management of the island by TIAC, the island's ecosystem would have been decimated through farming, poaching and mining for diamonds and so the benefit being enjoyed by the local communities would have been lost . They believe that if the Tiwai Island forest is properly conserved, their children, grandchildren yet unborn will be educated enough to handle the affairs of the project even after TIAC may have exited in future. Also, most of the women and youths believe that if the management of the island is left in their hands, they will enjoy more benefits. They look forward to the day when TIAC would hand over the affairs of the island to the local communities, but agreed that with a greater involvement of other stakeholders and investors, the potential for community development could be huge.

All the community focus groups were dissatisfied over the recent decline in the activities of TIAC on the island, which they said has led to the general feeling that TIAC is losing their influence on the island. However, they believe that a more inclusive version of TIAC would trigger greater acceptability and collaboration among local communities. This is because some sections of the community representative do recognise and support the work of other organisations that run programmes in the Tiwai communities, including Carma Cola and Tiwai Island Community Committee (TCC).

2.4 Knowledge and acceptability about the legal status of Tiwai Island among local communities

Tiwai island was made a WildLife Sanctuary in 1985 through facilitation by John Oates. According to the provision in the act the Tiwai Island wildlife or game sanctuary was declared through the consultation and agreement with the chiefdom council and local communities. However, most of the local people who were involved in the negotiations and were signatories to the agreement are now deceased and the younger generation think that a review of that agreement is long overdue. The communities still recognise the legal protection of the island as given in the 1972, but would like to see greater protection with greater roles played by the local authorities and the people themselves. In fact, the youths and young men suggested that if government could engage and train wildlife rangers from members of the local communities, there would be greater effectiveness in the protection of wildlife in and around the island. The youths know the area better, including the entry and exit points better, can easily identify internal and invading poachers and so should be able to handle the situation more efficiently. In addition to government appointed rangers, local guides should be trained across all communities, to support the surveillance and monitoring mechanism for the protection of the wildlife on the island.

3.0 FUTURE ENGAGEMENT ON TIWAI ISLAND BY LOCAL COMMUNITIES

3.1 Community's perspective on how the Tiwai Island should be managed in the next 10years

The local leaders, women and the youths recognise the importance of the Tiwai Island as a place where variety of plant and animal species exist and are being conserved either for ecosystem services, tourism and research purposes. They therefore expect more robust ways of protecting the reserve and making it more attractive to visitors. Some even talk about expanding the potential of the island by the introduction of different species of animals that are not common in Sierra Leone; although this was said out of ignorance of the consequences it might have on the local ecology of the island, which none of the local people seems to understand.

The consultation also revealed that there is a wealth of local knowledge among each of the target categories in the focus group in terms of plant species and the wildlife of Tiwai Island. This knowledge base only requires some further training to enhance individuals within the local communities to engage in research and monitoring, and in tour guiding. Also, as it used to happen in the early days of the operations of the sanctuary, many community people were engaged in different forms of non-skilled labour on the island, including brushing of the trails. They believe that many more such opportunity exists on the island, especially after the construction of the research and dormitory facilities for which the local young people should be employed.

There was a unanimous affirmation of willingness by all community groups to be involved one way or the other on the management of the island. However, some of the women are not particularly enthusiastic about working on the island because of their traditional engagements, but would like to have a say on the decision making process on how the island is managed. It was clear from the discussion that the communities want to be involved in the following ways:

- The communities should be engaged in supporting the research and monitoring activities on the island and be involved in training opportunities for this purpose.

- Be engaged in the daily management activities for the island, including skilled labour (e.g. keeping the accounts books and tour guiding) and unskilled labour (e.g. cleaning of trails and keeping the dormitories).
- Some community youths should be appointed into government service by NPAA or Forestry Division to serve as rangers assigned to the Island.

- Inclusion in the management committee for the island, in whatever form it might take; particularly the chiefs and TCC to be recognised as important stakeholders within the new management arrangement.

- To establish a skills training scheme for youths in various fields of technical trade. It was clear that youths in the Tiwai Island communities are unemployed and untrained, and so the lack of training opportunities was a key concern during the discussions. Areas of training highlighted were carpentry, masonry, craft making, gara tying and dyeing, weaving, tailoring, solar light technicians, wildlife ranging and tour guiding. This will ensure the availability of local expertise whenever such employment opportunities arise at Tiwai Island. It will also create opportunities for self-employment for the youths and young people in these communities. In some of these trades, training should be followed by the provision of start-up kits.

- The women and the youths expect that the co-management arrangement will consider the establishment of a cooperative and micro-credit scheme, to enhance their livelihood base and improve the living standards for them and their children. They constitute the most active working population in these communities.

- TIAC or its new structure must have representatives from each community, other than the paramount chiefs. Alternatively, smaller committees should be established at community level, working in tandem with TIAC (or its new form) and contributing to decision making and running of the day-today affairs of the island.

- Included women in the management committee and engage them in programmes organised by Tiwai management, especially in the area of hospitality (reception, food provisioning and entertainment). For instance they were aggrieved that some other group of women who are not from the Tiwai communities had to cook and serve the food during the consultations, which they think could be better done by them.

3.2 Other groups or stakeholders the community wants to be involve in the management of the island

All community groups were interested in making input into the question of the involvement of other stakeholders in the management of the island. The enthusiasm shown in responding to the question was an indication of the willingness by the local community to have more players in the management network for the island. Their general perception is that having more players with a variety of roles and/or investment potentials will bring more benefits and job opportunities to the Tiwai communities. Whilst there is a common positive feeling and acceptance of the impacts made by TIAC and EFA, the recent decline in funding for community-based activities is being somewhat interpreted as fatigue on the side of TIAC/EFA to mobilise funding, therefore the need to encourage other potential stakeholders to sustain funding for the island and the surrounding communities. The following are the potential stakeholders proposed by the communities during the consultation:

- AFFA CARMA COLA – an NGO already operating in these communities and is supporting community development activities such as construction of schools and water wells, provision of scholarship for students, direct cash payments to communities and their leaders etc. This NGO buys cola nuts from the communities, which is used in the UK to produce coca cola drink that is effectively marketed sold at a higher cost in the UK because it carries a label indicating the profit goes towards community development around Tiwai Island. The communities people want Carma Cola to collaborate with EFA in an arrangement that would ensure that they continue to support development programmes in the communities, whilst operating as a significant stakeholder in the management of the island.

- TIWAI ISLAND COMMUNITY COMMITTEE (TCC) - The youths, women and some chiefs across the two chiefdoms perceive TCC as an alternative to TIAC. However, some sections of the community representatives admitted that TCC lacks the requisite skills and experience to be able to replace TIAC; otherwise, TCC could be incorporated into the management committee for the island as key partners representing the interest of the local communities.

3.3 Community expectations on the new management arrangement for the protection of Tiwai Island

The issues outlined below represent the collective perceptions of the various categories of representatives that were engaged in the chiefdom level consultations, on what additional things that should be done to ensure effective management of the island:

- Community bye-laws should be developed to compliment government legislation governing a game sanctuary. The implementation of government policy and the community bye-laws should be done across the board and there should be no sacred cows. Previously, only non-indigenes of the area were prosecuted for violating the laws governing the island. This time the community representatives think that no one should be an exception the rules. According to the TCC Chairman, the youths are responsible for most of the problem that is going on in the Tiwai reserve. Therefore, if TCC is recognised by TIAC, they will make sure that there is effective law enforcement. In addition, members of TCC can be trained and supported with logistics to serve as a surveillance unit for the periphery of Tiwai Island.

- The local traditional heads should champion the development and implementation of bye laws and government policies governing the island. The local community heads (chiefs, headmen, mammy queens) are most respected in these communities and therefore when they make customary bye-laws, nobody will go against it and any defaulter will be punished.

- Punishment for poaching and encroachment should be made stronger and compensation paid to personnel who apprehend violators. For instance, the proposal to pay monetary compensation to people who apprehend any poacher caught with his weapon and presented to authorities, should be strongly considered. Accordingly, such mechanism will encourage intensive surveillance activities with the aim of discouraging poaching and encroachment on and around the island.

- Alternative livelihood programmes be provided, more especially for the youths such as sustainable agriculture, micro-credits.

APPENDIX III - CONSULTATIONS WITH OTHER STAKEHOLDERS ON TIWAI ISLAND

Prof A.B. Karim*, Dr A. Okoni-Williams & Jimmy Squire

*Corresponding Author

DR MOHAMED IMAM BAKARR, ADJUNCT, SCHOOL OF NATURAL RESOURCES MANAGEMENT, NJALA UNIVERSITY

- Work started on Tiwai in the early 1980s by John Oates who fell in love with and was passionate about the Island. Initial focus was on the primates and not the people.
- John Oates later convinced the Chiefdom authorities to declare Tiwai a wildlife sanctuary.
- Tiwai was initially a destination for Primatologists, but interest in other taxa soon followed
- The involvement of the Peace Corps led to the involvement of people in ecotourism.
- Peace Corps did zonation for the ecotourism, also did a Management Plan for the island
- Research on Primates almost vanished since the last researcher left during the war
- The Academic partners (Miami, Hunter College, Njala) had their own focus
- EFA in its management tried to develop programs built around people
- Njala established a Functional Research Station
- Njala needs to have a dedicated research team to run Tiwai; they should have committed, and dedicated Field Technicians deployed to the island.
- Need to explore Research Grant mechanism for Tiwai

PROF RICHARD WADSWORTH, DEPARTMENT OF BIOLOGICAL SCIENCES, NJALA UNIVERSITY

- First Went to Tiwai for the 1st time in 2003 during the Mapping Land Cover Project which he was undertaking and has been going there since then
- His impression was that Tiwai is a good new story for Sierra Leone, although there was still problem with poaching but there was no logging.
- Forest has grown, no logging, once on a while there is mining for diamonds. There have been tests/trials pits mainly by outside people. The Primates population have improved substantially
- Though there have been some issues, the general trend is a steady improvement from conservation point of view. EFA has hung in despite challenges and badmouthing. Others came and left within a period but EFA weathered the storm. Accountability has been the key issue for many of the intending and operational groups.
- He is presently a member of staff of Njala University and is in charge of research and reviewing research proposals for Tiwai. Those that were not viable, such as one to habituate the monkeys. were rejected.
- In his estimation Tiwai receives over 700 visitors per year The Money generated is used partly for the maintenance of the facilities and the surplus is being distributed to (many) communities. The key people want the money to be shared rather than used for community (local) development. They think mining and logging were more beneficial
- Several attempts to give alternative livelihoods to the communities but these alternative income generation were not viable; NGO intervention was froth with lack commitment and deception from either the entrepreneurs or the committees.
- Cited attempts at Aquaculture training on fish pond construction and also the development of nursery by boat landing site, cocoa etc. the Agriculture expert from India that was brought in for making charcoal using bamboo. The Communities not commercially minded

- Thomas Armitt first came to Tiwai to carry out research after which he came back to Tiwai and set up a private company. Carma Cola, which produced a special brand of Coca cola. The label on the Coke is that it is to support poor communities around Tiwai. The coke is sold for a much high price than the normal coke.
- With respect to sustainable management of Tiwai, Carma Cola and other groups needs to work through TIAC, at least on a polite approach to keep others out would not be a good concept.
- For sustainability, Tiwai needs projects. Most projects were short term. There has to be long term commitment from intending operators
- Intervention to be long term commitment e.g. oyster festival in Bonthe.
  - Farmers growing things they do not consume
  - Sponsor coffee and cocoa festival – Coffee tasting/drinking ceremony need to be organized- Open a booth at National/ regional festivals
- A review of funding to communities, motivation to teachers (Bonus) would be better and more effective approach instead of scholarships
- The John Oates factor has also negatively impacted Tiwai. He emphasizes his role in establishing Tiwai and emphasize the role of others. It is our resource not a community resource. Only land-owning families/communities should benefit.

- **For The way forward**:
  - An MOU signed between communities and anybody/ operating entity that want to work/operate around community. The MoU should spell out what their role is etc. it will not be prudent for an MoU to be signed between TIAC and Government as it may trigger political issues.
  - Restructure TIAC. Theoretically fine but practically not functional. The Paramount Chiefs should no longer be chairman of TIAC
  - New structure should have 3 representatives from each community, (men, women and youths); such a committee will be too big. Also, Tacugama and Gola Rain Forest to be members of the Committee

- The key management challenge is that for visitors – how to manage increased number of visitors without damaging the environment.

- Other issues to be considered
  - The RSPB factor
  - The Nagoya Protocol
  - The Biosphere Reserve concept
  - World Heritage site
  - Joining Tiwai with Gola
  - Access to Benefit Sharing
  - Developing of Medicinal gardens
  - Plant rattans, etc; and Non Forest Tree products
  - The need to talk to Carma Cola - business strategy

STAFF OF THE CONSERVATION TRUST FUND (CTF)

- The CTF sees itself as playing a prominent role in the new co-management structure for Tiwai and as such, expect to be included as one of partners in the its members.
- Tiwai is a valuable wildlife and conservation resource. The long-term sustainability of the resource there is a need to establish a Trust Fund.
- Government should cater for the Tiwai Island in terms of providing the following:
  - deployment of rangers paid by government of Sierra Leone

    - covering some of the running and maintenance cost to the island, as part of the functions of the support PAs
- The Conservation Trust Fund, according to the Act, should be responsible to finance projects in PAs, and so would wholeheartedly support the establishment of a trust fund for the island
- NPAA should be involved in implementing projects and programmes, whilst Conservation Trust Fund would be involved in monitoring.
- The CTF will provide expertise and support the development of proposals for resource mobilisation and management of island's biodiversity resources.
- The CTF would like to see promotion of investments in the area of the development of touristic facilities such as eco-lodges etc.
- The CTF made the following key recommended inclusion in the co-management plan
    - Inclusion of CTF in co-management structure to strengthen CTF's participation and contribution to the management of the island; so there is need to review the stakeholders' analysis to reflect the role of the CTF.
    - Some ideas of what may happen if the co-management time frame expires or the management committee ceases to function;
    - Mechanism that would ensure transparency and accountability in the course of implementation of the management plan.
    - A trust fund must be set up and will be supported by the CTF.

EXECUTIVE DIRECTOR OF NATIONAL PROTECTED AREA AUTHORITY (NPAA)

- NPAA has a mandate for the protection of all PAs and Tiwai is one of them.
- The importance of Tiwai in terms of Biodiversity cannot be over-emphasized.
- Tourism is now in the forefront of Government's agenda and Tiwai is one of the main tourism destinations.
- The Ministry now requires all PAs to be sending quarterly reports, including report from Tiwai island, once the co-management plan starts operation.
- The Sherbro Estuary Management Plan calls for calls for a Supervisory team (NPAA), An Advisory Team (Paramount Chiefs, etc) and a Management team which comprise support organisations. The Management Committee is bounded by a constitution. The NPAA would like to see a similar concept in operation at Tiwai, under the new co-management plan.
- The CTF should raise funds for NPAA and support Tiwai in terms of the employment of rangers, which ideally should be employed from the area.

DIRECTOR OF FORESTRY, MINISTRY OF AGRICULTURE, FORESTRY AND FOOD SECURITY

- Forestry has not been active on TIAC. Forestry has more commitment to show to the conservation of Tiwai and not interested in the material gains of becoming a member of TIAC
- Forestry Division is obligated to play a very important role in the management of Tiwai as the first Game Sanctuary and so happy to function are supporting partners.
- The Forestry Division supports the agreed with the proposed co-management structure, wherein the Division will serve as a secondary stakeholder, and the NPAA being a primary stakeholder.
- A good example worth citing is the Gola Forest co-management arrangement for the management of buffer zones around the national park, which for all intent and purpose is a success story. It is a 3-tier management.
- The Environmental NGOs are only coming in to help, as funding from Government is not forthcoming. Govt should be able to maintain the resources through working with and recognising the interventions by the NGOs and other partners.
- At Gola National Park, there is a tripartite arrangement as follows: (i) Government of Sierra Leone; (ii) Royal Society for the Protection of Birds (RSPB) & Conservation Society of Sierra Leone (CSSL); and (iii)

the local communities represented by the Paramount Chiefs from all the seven Chiefdoms around the Gola NP. The Government is represented by the Minister of Agriculture and Food Security. They meet two every year and the meetings are chaired by CSSL; all major partners should be present for any major decision to be taken.

- The Gola also has a Board of Directors, which is responsible for the day to day running of the affairs of the Park.
- There is a special account to which sale of carbon is deposited for the management of the Gola National Park and Loma, which is managed by a company limited by guarantee.
- The Gola National Park administration would be very happy to be involved in the co-management plan implementation at Tiwai Island.
-

The undersigned representatives hereby confirm the processes leading to the development of this Co-Management Plan and affirm their commitment to upholding the aspirations of the said Plan for the continued protection and development of the Tiwai Island Wildlife Sanctuary and its host communities.

1. Paramount Chief Alameen Kanneh – Koya Chiefdom
   Signature _____ Date 30.08.2020
2. Regent Chief Vandi Samei Rogers – Barri Cheifdom
   Signature _____ Date 30/08/2020
3. Chairman Soabu Sowa – Chairman, Pujehun District Council
   Signature _____ Date 30/08/2020
4. Chairman Mohamed Sesay, Chairman, Kenema District Council
   Signature _____ Date 7/09/2020
5. Mr. Joseph Musa, Exec Director – National Protected Area Authority
   Signature _____ Date 30/08/2020
6. Chief Brima Sesay Woya Section Chief – Koya Chiefdom
   Signature RTP Date 30/08/2020
7. Chief Francis Tarleh, Section Chief – Barri
   Signature pp. Francis Tarleh Date 30/08/2020
8. Madam Kadie Gbao, Representative-Barri Chiefs
   Signature RTP Date 30/8/2020
9. Samai Nyallay, Representative – Koya Chiefs
   Signature Right Thumb Print Date 30/08/2020
10. Ms jeneba Amara, Women's Leader – Barri
    Signature Right Thumb Print Date 30/08/2020
11. Ms Hawa A. Kallon, Women's Leader – Koya
    Signature RTP Date 30/08/2020
12. Mr Mohamed Koroma, Youth Leader – Barri
    Signature _____ Date 30/08/2020
13. Mr Fatorma Nyallay, Youth Leader – Koya
    Signature RTP Date 30/08/2020
14. Professor Richard Wadsworth – Representative Njala University
    Signature _____ Date 30/8/2020
15. Tommy Garnett, Representative, Environmental Foundation for Africa
    Signature _____ Date 30/8/2020

Foreword

Tiwai Island Wildlife Sanctuary is the oldest community-driven conservation initiative and one of the best known in Sierra Leone. For years, it has been at the international forefront in pursuing research in nature conservation, steered by strong stakeholder partnerships. Since its gazettement some five decades ago, it was only in 2020 that the preparation of a formal management plan was completed. The "Tiwai Co-Management Plan 2020-2030" (CoMP), approved in September 2020, was a crucial stride in guiding for an objective management and administration of the Island. To an ordinary eye, the preparation of this IMP only about a year after the approval of the Co-Management Plan appears paradoxical. However, it connotes the current solid determination by the Government of Sierra Leone to jointly nominate Tiwai Island Wildlife Sanctuary and Gola Rainforest National Park as a World Heritage Site, the first in the country. Accordingly, this IMP is meant to meet the requirements of the Operational Guidelines for the Implementation of the World Heritage Convention for a nomination dossier of a natural World Heritage Site.

Tiwai Island portrays seclusion and wilderness, and is currently abutted by a somewhat less dense rural community population. Ideally, this sparse population is a conservation advantage of its own. Yet, the Island remains vulnerable to a multiplicity of anthropogenically driven challenges, and potentially natural catastrophes and risks. The interventions envisaged in this IMP are meant to counter these pressures in the future. Nonetheless, this ambition cannot be realized in isolation: collective efforts of all our partners and stakeholders, particularly the local communities who are the rightsholders and frontline custodians of the Island, must be pursued.

The Tiwai CoMP 2020-2030 was prepared through a thorough consultative process, involving a broad spectrum of stakeholders and partners from within the ecosystem and beyond. We are thus confident that their legitimate concerns were taken on board during the management planning process, which has now been extended to this IMP. Regrettably, time constraints precluded the preparation of a CMP, meaning that some chapters await the appropriate time - currently scheduled for early 2025. While this may be disturbing to some, it nevertheless depicts the very nature of protected area planning. We undertake to continue protecting Tiwai, and indeed the greater Tiwai-Gola ecosystem as a locally, nationally and globally renowned priceless resource, and remain confident that this IMP provides the best possible groundwork for achieving this determination.

It is thus with great pleasure that we declare our full political will, commitment and support for this IMP. We also entrust its implementation to the Tiwai management Team, in collaboration with concerned partners.

Signed
Minister of Tourism and Cultural Affairs

Signed
Minister of the Environment and Climate Change

Approval Page

The National Protected Areas Authority (NPAA) has approved the Implementation of this Interim Management Plan (IMP) for Tiwai Island Wildlife Sanctuary (TIWS).

Executive Director
NPAA - 25/2/25

Title/Institution & Date

Chairman NPAA
25/2/2025

Title/Institution & Date

TIWAI ISLAND WILDLIFE SANCTUARY

INTERIM MANAGEMENT PLAN

2023-2025

Approval Page

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_____ _____

Title/Institution & Date *Title/Institution & Date*

This IMP for TIWS has been adapted from the 'Tiwai Island Co-Management Plan 2020-2030', initially prepared by a team of experts from Fourah Bay University College, Sierra Leone. Its preparation was prompted by The Government of Sierra Leone's decision to initiate a nomination process for "Gola-Tiwai Complex" as a serial natural World Heritage Site. While as much as possible keeping to the intention of the original text, the 2020-2030 Co-management Plan's structure, style and content have been substantially revised to fit the nomination requirements of the Operational Guidelines for the Implementation of the World Heritage Convention[1].

Funding for the preparation of this plan was provided by the World Heritage Centre with the generous contribution of the Government of Japan.

Technical planning assistance was provided by James V Wakibara.

Citation

National Protected Areas Authority (2023) Interim Management Plan for Tiwai Island Wildlife Sanctuary 2023-2025. Government of Sierra Leone.

Prepared by James V Wakibara, Consultant, UNESCO World Heritage Centre.

Photo credits: **Tommy Garnett** (Front cover, Plates C.4.1, D.1.1.1, D.2.1), **James Wakibara** (Plates C.1.1, C.2.1-a, D.3.1); **Chen Xiangling** (Plate C.2.1-b)**.**

Front Cover: Drone Aerial Overview of Tiwai Island Wildlife Sanctuary.

[1] https://whc.unesco.org/en/guidelines/

Acknowledgements

The preparation of this IMP for TIWS was made possible through the continuous collaboration and support by various individuals and institutions. The Government of Sierra Leone through the Ministries of Tourism and Cultural Affairs, and Environment and Climate Change sustained an all-round higher-level commitment throughout its preparation. EFA, NU, RSPB, GRNP, various experts from within and outside Sierra Leone, as well as local communities living adjacent TIWS provided invaluable information and/or useful data when available. Matthew Hatchwell, Kumiko Yoneda, Xiangling Chen, Tommy Garnett, Richard Wadsworth, Bintu Forau-Musa and Kamara Ishmael contributed immensely to the technical discussions on its contents. The World Heritage Centre provided support in funding and coordination with the generous contribution of the Government of Japan.

Acronyms

CEPF	Critical Ecosystem Partnership Fund
CDC	Centers for Disease Control
CR	Critically Endangered
CMP	Comprehensive Management Plan
CSO	Civil Society Organization
CoMP	Co-Management Plan
CTF	Conservation Trust Fund
DSA	Daily Subsistence Allowance
EFA	Environmental Foundation for Africa
EN	Endangered
EPA-SL	Environmental Protection Agency, Sierra Leone
ERV	Exceptional Resource Value
EU	European Union
EVD	Ebola Virus Disease
FD	Forestry Division
FGD	Focus Group Discussion
FoSED	Food Security and Economic Development
GRNP	Gola Rainforest National Park
GTZ	German Technical Corporation
IMP	Interim Management Plan
LAC	Limits of Acceptable Change
LC	Least Concern
LFA	Logical Framework Approach
KEA	Key Ecological Attributes
MDAs	Ministries, Departments and Agencies
M&E	Monitoring and Evaluation
MP	Member of Parliament
MoU	Memorandum of Understanding
MRU	Mano River Union
MZP	Management Zoning Plan
NGO	Non-Governmental Organization
NPAA	National Protected Areas Authority
NSF	National Science Foundation
NT	Near Threatened
NTFP	Non-timber Forest Products
NU	Njala University
PA	Protected Areas
RSPB	Royal Society for the Protection of Birds
SMART	Specific, Measurable, Attainable, Realistic, Time-bound
SWOT	Strengths, Weaknesses, Opportunities and Threats
TCC	Tiwai Community Committee
TIAC	Tiwai Island Administrative Committee
TIWS	Tiwai Island Wildlife Sanctuary
TKS	Traditional Knowledge and Skills
UK	United Kingdom
UNHCR	United Nations High Commission for Refugees
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
VU	Vulnerable
WABiCC	West African Biodiversity and Climate Change

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Signed **Minister of Tourism and Cultural Affairs**	Signed **Minister of the Environment and Climate Change**

Executive Summary

This IMP (2023-2025) has been produced according to the "Strategic Planning Process" with some modifications to encapsulate the historical co-management experiences of Tiwai, and to make the plan more relevant to its day-to-day management needs. A participatory approach has been adopted to develop the IMP borrowing from the 2020-2030 Tiwai CoMP, which brought together a wide spectrum of stakeholders. The consultative process involved in the preparation of CoMP was two-tier, based on Focus Group Discussion (FGD), Key Informants and general interviews of the rest of the communities within the local Chiefdoms. This methodology was meant to elicit candid ideas and interests of stakeholders towards the sustainable safeguarding of Tiwai. Focus was placed on the eight local communities, which reside in close proximity to Tiwai, as they are its traditional rightsholders and frontline custodians. This approach enabled the diverse interest groups to work together constructively and where necessary to reach compromises and consensus at best protecting Tiwai ecosystem in the longer term. Consequently, this IMP provides a strong foundation for the future management of Tiwai that is hitherto commonly agreed upon by the key stakeholders.

The main structural orientation of this IMP is its organization into four major management strategies:

- Ecosystem Management
- Tourism Management
- Community Outreach
- Operations Management

These strategies are designed to facilitate the implementation of the IMP by building a sense of ownership and accountability. Each Strategy includes clear management objectives and targets as set out for the next two years of the IMP. Formulation of actions and specific activities or tasks awaits the preparation of a CMP, envisaged in the next two years (2023-2025). The CMP will also address the potential environmental impacts associated with implementation of the four strategies and set the monitoring framework. In addition, a zoning concept will be employed to plan for use with the Limits of Acceptable Change (LAC) concept in mind. This approach is meant to ensure that the IMP remains dynamic, with the required flexibility and responsiveness to the changing management needs and priorities of Tiwai.

The IMP also incorporates the Logical Framework Approach (LFA) concept to conservation planning, the main feature of which is the explicit and logical linkages between the cascading planning levels i.e., Strategies, Objectives and Targets. During the preparation of the CMP, these linkages will be further extended to Actions and ultimately to the Activities or Tasks in the Annual Operations Plans. The application of LFA has helped develop an IMP that can be effectively and efficiently implemented, as well as easily monitored and evaluated.

This IMP defines henceforth a clear vision and overall purpose of Tiwai, with the purpose statement derived from Tiwai's Exceptional Resource Values (ERVs). The most important of these as identified by stakeholders, are the Moa River, High canopy mature forest, Riverine Forest and populations of chimpanzees, other primate species, as well as Pygmy hippos. A purpose statement for each Strategy has also been formulated to best guide its implementation on the ground. The specific objectives of each of the four strategies focus on the following main considerations:

- *Ecosystem management*: reduction of conservation threats and enhancing monitoring and research.
- *Tourism management*: improving visitor experience, increasing revenue generation and mitigating tourism-related environmental impacts.
- *Community Outreach*: Strengthening co-management of Tiwai and benefit sharing mechanisms with local communities, enhancing conservation education and awareness, and strengthening collaboration with partners.
- *Operations Management*: Protection of Tiwai ecosystem core values, safeguarding human life and properties, improving infrastructure and facilities, and strengthening of Tiwai administration system.

CONTENTS

A. BACKGROUND INFORMATION

A.1 Conservation history

The TIWS was preserved due to its exceptional plant and wildlife diversity. Since the 1970s, however, its conservation profile has traversed a series of both fortunes and downturns (**Table A.1.1**). The 'golden age period,' for instance, saw TIWS thriving with impressive concentrations of wildlife, with ample research work and tourist visitations, respectively, and attracting a fair volume of external funding for supporting conservation efforts on the ground. In contrast, the 10-year wave of civil war starting 1991 led to a complete reversal of such achievements. Researchers were evacuated and the Island occupied by rebels. Financial support almost ceased, with a consequent increase in both poaching and deforestation that destroyed its biodiversity (Lindsell et al. 2011)[2].

Table A.1.1: Chronological history of Tiwai Island conservation[3]

Date	Activity
1970 (mid)	**Identification of a high biodiversity value of Tiwai Island** by Njala University researchers in Sierra Leone. Dense and diverse primate fauna was observed, together with other endemic West African species such as the pygmy hippo.
1970 (late)	**Discussions commence with the two Paramount Chiefs**, especially V.K. Magona the VI[th] of Barri, on reducing hunting and other exploitation on the Island.
1987-1991	**The 'golden age'** of TIWS. American Universities[4] funded by the United States provided significant support to researchers on the Island (resulting in several ground-breaking papers led by John F. Oates, Whitesides, Fimbel etc.). A Research Centre is established by Njala University and a Tourist Camp established with American funds (although the number of tourists unknown).
1987	**Tiwai Island is given legal protection** as a 'Game Sanctuary'[5] after local chiefs and villagers requested the Forestry Department to designate it a Wildlife Sanctuary in 1984.
1989	**A Draft Management Plan[6]** is developed and supported by the United States Peace Corps[7] with substantial zoning i.e., 23 zones in total. This plan was never formally adopted although, fortunately, farming and logging did not restart.
1989	**Establishment of the TIAC** as TIWS governing entity - composed of communities, government agencies, universities and conservation groups.
1991	**Documentary:** 'Island of Apes' produced for a United Kingdom based Anglia Television raises the visibility of Tiwai.
1991-2001	**Sierra Leone Civil War:** Researchers and Peace Corp volunteers were evacuated very early on in the war as TIWS was close to where the insurgency started. Very high levels of poaching occurred during this period. Minimal financial support was provided from overseas and distributed through the Department of Forestry.

[2] Lindsell J, Klop E & Siaka AM (2011). The impact of civil war on forest wildlife in West Africa: mammals in Gola Forest, Sierra Leone. *Oryx*, **45(1):** 69–77 https://doi.org/10.1017/S0030605310000347
[3] Adapted from the 2020-2030 Tiwai CoMP.
[4] The City University of New York Research Foundation, The University of Miami and the New York Zoological Society
[5] The Government of Sierra Leone. Gazette Notice No. 342 of 1987.
[6] Tiwai Island Administrative Committee (TIAC) (1989). Tiwai Island Wildlife Sanctuary. General Management Plan. Bill Eichenlaub. US Peace Corps.
[7] This plan, developed by a Volunteer and 'tentatively endorsed' in 1991, proposed for limited (supervised) economic exploitation of TIWS. The extent to which local communities and other stakeholder participated in its preparation is unclear, and the 23 network of 'use-zones' it proposed were considered too cumbersome to implement.

2000	**First visit to Tiwai** by staff from the Environmental Foundation for Africa (EFA).
2002	**Re-establishment of TIAC** with input from line Ministries (Forestry, Tourism), Local Government (MP's, District Councillors), Traditional Authorities (Paramount Chiefs), Academics (Njala University) and NGOs (EFA).
2004	**Population of Campbell's monkey** estimated at 10% of its pre-war levels by Ibrahim Bakarr of Njala University[8]
2002-2006	**Financial support** obtained from the Critical Ecosystem Partnership Fund (CEPF), UNHCR and Irish Aid are used by EFA, partnering with Njala University, to reconstruct and restore the biological research and eco-tourism facilities on the Island, provision of a boat etc. Pre-war funding partners (i.e., Hunter College and Miami University) appear unable or unwilling to re-establish ties with Sierra Leone.
2006	**Official re-launch of TIWS** as an ecotourism destination and site for research.
2002-date	**Numerous development initiatives** are implemented with varying degrees of success but not all are 'branded' as being due to the conservation of Tiwai Island under the leadership of TIAC. Examples include two of the culvert bridges on the road from Potoru-Kambama (funded by GTZ through EFA), the school at Kambama (funded from visitor income), Solar power sets for lighting and charging in all Tiwai Communities and the schools and clinics in their chiefdom headquarters Potoru and Boama (funded by the EU and implemented by EFA). Agricultural development (e.g., FoSED - funded by European Union, implemented by EFA and the international NGO Welt Hunger Hilfe). Eco-tourism development, employment of locals in guiding and supporting tourism, boatmen, construction and maintenance of facilities, cooking for visitors and assisting researchers, etc.
2013	**Tentative listing** of TIWS as a prospective World Heritage Site, together with three others, following applications by Sierra Leone's Monuments and Relics Commission, the Gola Rainforest National Park and the Environmental Foundation for Africa.
2013-2014	**Need for a new management structure is identified**. Work is undertaken by Environmental Resources Management Foundation, UK on a 'pro-bono' basis and an eco-tourism management plan is drafted by an EFA intern. Extensive discussions are undertaken internally and externally, but several serious issues remain unresolved.
2014-2015	**Eruption of Ebola with zero income from visitors**. EFA and partners mobilise some resources (rice and cash) for the communities.
2015	**Declined attendance and input from most members of TIAC** has dwindled, to the extent that EFA and the two paramount Chiefs are the only active members.
2015-2016	**Major storm** on Tiwai Island causes extensive damage to buildings and various equipment including solar lighting at the visitor/ecotourism camp. EFA mobilises funds and works with local community to rebuild the structure and restore the services.
2017	**Major storm** causes extensive damage to buildings at Field Research Station. A CDC grant enabled Njala University to repair, refurbish and upgrade the facilities at the field research station.
2018-2019	**Preparation of Management Plan** with funds from USAID, through WABiCC, RSPB and Gola Rainforest National Park to commission consultants to prepare a new management plan.

The end of the war in 2001 revived the conservation efforts on the ground, spearheaded by TIAC and supported by the local communities, the government and the global conservation partners at large (**Plate A.1.1 & A.1.2)**. The administrative and co-management framework of TIWS was progressively strengthened and funding support

[8] Unpublished

reinstated. Over the last 20 years, steady control of anthropogenic disturbances on TIWS has allowed for a regeneration of secondary forest and a gradual recovery of biodiversity to its pre-war levels.

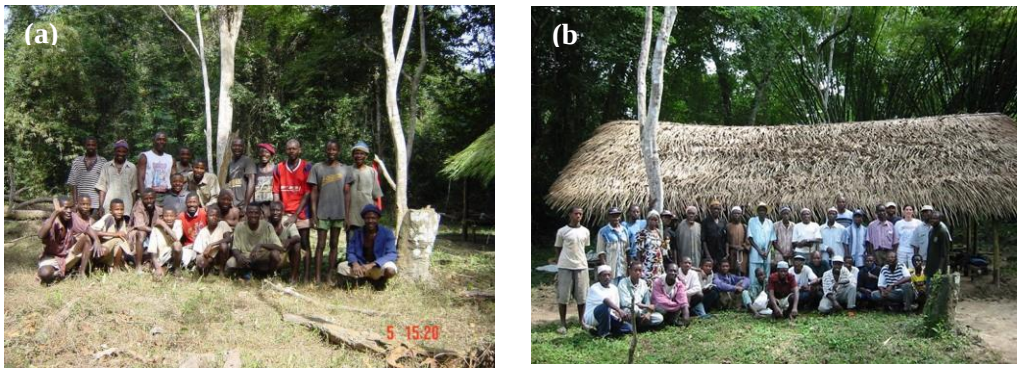


Plate A.1.1: **Tiwai after the end of the ten-year (1991-2001) civil war: (a) Local communities after re-opening of the sanctuary ; (b) Visit by a Team of Donors in 2002**

Plate A.1.2: **Re-opening of Tiwai Island for research and eco-tourism in 2006 by the former Vice-President of the Republic of Sierra Leone, Hon. Solomon Ekuma Berewa (of blessed Memory) - an indication of the Government's commitment to conservation of the Sanctuary**

A.2 Co-management of Tiwai

Co-management[9] is a process in which two or more social actors or resource users negotiate, define, and guarantee amongst themselves a fair sharing of the management

[9] Also known also as participatory, collaborative, joint, mixed, multi-party or roundtable management, respectively - see e.g., Carlsson L & Berkes F (2005) Co-management: Concepts and methodological implications. *Journal of Environmental Management* 75: 65-76 doi:10.1016/j.jenvman.2004.11.008

functions, entitlements and responsibilities for a given area or set of natural resources [10] . It guarantees specific rights and responsibilities relating to, for instance, information sharing and decision-making. Co-management can also be seen as a pluralist approach to managing natural resources. It involves different partners with multiple roles towards environmental conservation, sustainable use, and equitable sharing of natural resources. There are many successful examples of natural resources co-management in Africa and worldwide at large. In Sierra Leone in particular, besides Tiwai, this management model has been successfully adopted in some other protected areas.

Examples of successful Co-management initiatives in natural resources conservation in Sierra Leone

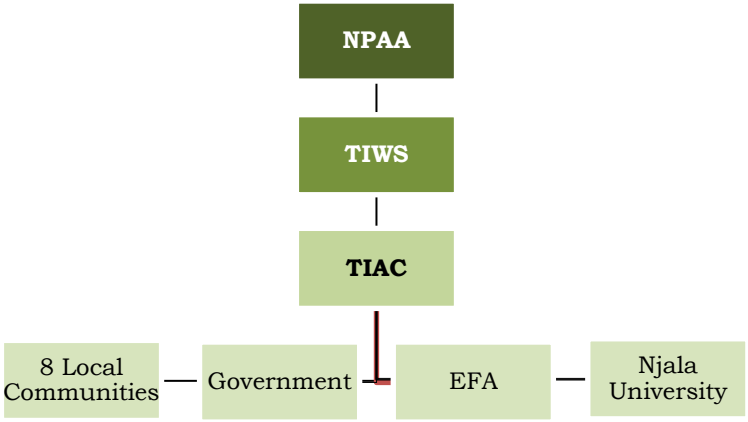
- The Gola Forest Co-management: Local communities utilize the resources within the 4km 'Buffer zone' belt. They in turn benefit from several direct benefits such as cash payments and scholarship support for their children, and from provision of social amenities such as water holes and bridges projects, and sharing of funds generated from eco-tourism.
- Mamunta-Mayosso Wildlife Sanctuary Co-management: A collaboration between NPAA and the local communities. Seeds and farm tools are provided to the local farmers using part of Sanctuary eco-tourism proceeds.
- Sierra Leone River Estuary Co-management: Local community clusters co-manage mangroves and other natural resources in their respective areas (which are gradually expanding). They in turn benefit from a range of ecosystem services, in particular control of natural disasters such as flooding

Extracted from the Tiwai CoMP 2020-2030

Over the past 40 years or so, the needs of the local communities abutting TIWS and their consequent pressures on its biodiversity have scaled-up. At the same time, the key stakeholders and their inherent relationships have also transformed variably. However, its historical hurdles (including protracted financial constraints[11]) apart, TIWS can be said to have fairly been co-managed successfully, spearheaded by TIAC (**Figure A.2.1**). Co-management, therefore, appears to have been a historically strongly entrenched conservation philosophy amongst stakeholders of TIWS, which is considered to guarantee collective stakeholder appreciation and co-ownership of its resources. The case in point is that the local communities are not only the rightsholders of Tiwai, but also that their livelihood firmly depends on its ecosystem services (see **Section D.3**). Not surprisingly, therefore, during the management planning process, Tiwai co-management stood out sharply as a widely supported and cherished management style of choice by almost all the stakeholders consulted, in particular the local communities and their traditional leaders (details in **Appendices 1-3**). Accordingly, it has been duly adopted as a management model during the preparation of this IMP.

[10] Borrini-Feyerabend G, Farvar T, Nguinguiri JC and Ndangang VA (2007). Co-management and natural resources: Organizing, negotiating and learning-by-doing. GTZ and IUCN, Kasparek Verlag, Heidelberg.
[11] Significant costs, for instance, relate to co-managing Tiwai through conducting regular TIAC meetings. Due to financial constraints, however, this burden has progressively fallen onto EFA and the two Paramount Chiefs of Barri and Koya Chiefdoms.

Figure A.2.1: TIAC co-management model for TIWS



A.3 Policy, legal and legislative Environment

TIWS was declared a Game Sanctuary by Government Gazette Notice No. 342 of 1987 following a request by the local Communities to the Government of Sierra Leone in 1984. The legal provisions for its protection are supported in retrospect by the 1972 Wildlife Conservation Act and concurrently with the Protected Area Authority and Conservation Trust Fund Act 2012, which also applies to Game Reserves (the legal equivalent of a Game Sanctuary), National Parks and Strict Nature Reserves. In effect, TIWS is the equivalent of the IUCN's Habitat/Species Management area (Protected Area Category IV). The 1972 Wildlife Conservation Act provides general restrictions for unauthorized natural resources harvests in protected areas[12].

Articles 12 and 27 of The NPAA and CTF Act of 2012 (revised in 2022) transferred the responsibility of national protected areas to the NPAA under the respective Ministry. This implies that the Government has the legal authority to manage TIWS. Thus, although the Barri and Koya Chiefdoms are still recognized as traditional rights holders of Tiwai, their legal control and user rights, respectively, are currently limited by the national laws.

These recent legal revisions pertaining to protected areas apart, the tradition for community ownership and management of land in Sierra Leone remains historically strong, supported by the Provinces Land Act Cap 122 of the Laws of Sierra Leone. Under this Act, all land in the country is vested in traditional authorities on behalf of local communities. In other words, the Paramount chiefs and chiefdoms are considered the

[12] While these restrictions apply to protected areas in general, there are no clear-cut provisions on the specific restrictions per protected area category including, Wildlife sanctuaries such as TIWS. Legal reviews are therefore needed to address this issue.

equivalent of landowners and must be involved in any land transactions (Renner-Thomas 2010 p. 195)[13].

Restrictions of Wildlife Conservation Act (1972)

- Hunt or take possession of any wild animal
- Take any forest produce as defined in the Forestry Act
- Uproot, burn, strip the bark or leaves from, or otherwise damage any tree
- Set fire to any grass or herbage or kindle a fire without taking due precaution to prevent its spreading
- Do any act connected with forestry, agriculture or mining, excavate or prospect, drill or level the ground or construct or perform any work involving the alteration of the configuration of the soil or the character of the vegetation
- Fish or attempt to kill fish
- Set any snare, net, trap or other instrument for the purpose of catching or killing animals, or likely to catch, kill or injure any animals
- Introduce any species of fauna and flora, whether indigenous or imported, wild or domesticated;
- Construct any form of dam or weir across any river or streams or otherwise obstruct the channel of any river or stream

Extracted from the CoMP 2020-2030

This IMP focuses on strengthening four key strategic management areas: Ecosystem management, Tourism Management, Community Outreach and Operations Management (details in **Section D**). For its effective implementation, therefore, it should be supported by a wider set of appropriate policies and legal provisions, which cover not only conservation and land ownership issues, but also those related to tourism, community involvement and daily operations as well. Some of the relevant policies in this regard are summarized in **Table A.3.1** and frequently referred to in **Section D** in support of implementation of the four management strategic areas. It is therefore clear that the existing wider Sierra Leonean legal and regulatory environment provides for adequate support in safeguarding TIWS based on the strategic interventions being proposed in this IMP.

[13] Renner-Thomas, A. 2010. Land tenure in Sierra Leone: The law, dualism and the making of land policy, Milton Keynes. Author house.

Table A.3.1: Policies and legal provisions supporting strategies identified in this IMP for the management of Tiwai[14]

Provision	Relevance	Supported strategy
The National Protected Areas Authority (NPAA) and Conservation Trust Fund (CTF) Act of 2012	▸ Bring together the administrative and operational functions of all protected areas (PA) under a single supervisory agency ▸ Forge collaborative partnership with local authorities for the management of PAs. ▸ Supervise all protected areas including TIWS. ▸ Promote ecotourism in Protected Areas ▸ Formulate and implement conservation awareness activities for local communities, schools, and local administrations ▸ Promote knowledge of and participation in conservation programs and services, relating to socioeconomic and environmental issues including, fisheries, agricultural and forestry best practices, forest management, land, soil, and water conservation in Protected Areas and buffer zones ▸ Develop management objectives, structures, and mechanisms necessary for the management of the National Protected Areas ▸ Sensitise local communities and address local stakeholders' interests in land conservation and socioeconomic issues	Ecosystem Management Community Outreach Tourism Management Operations Management
The Environmental Protection Agency Act of 2008 and its amendments of 2012	▸ Provide guidance on aspects of environmental management and safeguards	Ecosystem Management Tourism Management Operations Management
The Forestry Policy 2010	▸ Develop collaborative partnerships with local communities and other relevant stakeholders for the sustainable management of reserve forests ▸ Ensure sustainable streams of	Community Outreach Ecosystem Management

[14] These are also specifically and repeatedly referred to in Section D in support of the proposed respective management strategies (see **section D**).

	economic, social, and environmental benefits.	
The Wildlife Conservation Policy of 2010	▸ Maintain viable populations of indigenous species of flora and fauna in their natural habitats ▸ Apply appropriate measures to monitor and improve their conservation status.	Ecosystem Management
Local Government Act 2004 and its 2007 Amendments	▸ Have jurisdiction and authority over all local community areas within districts ▸ Promote development and welfare of local communities in their localities	Community Outreach
Local & Investment Policy 2012	▸ Link local economies with foreign investment opportunities, including through transfer of technology and skills	Community Outreach Tourism management Operations management
Development of Tourism Act No 11 of 1990 (under review)	▸ Establish a National Tourism Authority ▸ Incentivise investors in the Hotel and Tourism sector	Tourism Management Operations Management
The Customary Land Rights Act no. 20 of 2022	▸ Protect customary land rights ▸ Manage and administer land subject to customary law	Community Outreach
Mines and Minerals Act no. 12 of 2009	▸ Manage harmful environmental effects of mining	Ecosystem Management

B. PLAN INTRODUCTION

B.1 Context

This 2023-2025 Interim Management Plan (Thereafter, Interim plan) builds on the existing '2020-2030 Tiwai Island Co-Management Plan,[15] (Thereafter, Co-Management Plan - CoMP) that was approved for implementation in September 2020. However, initial attempts to prepare a formal Management Plan for TIWS was in 1989 by TIAC, supported by an American Peace Corp initiative. Yet, this plan[16] was considered too cumbersome to implement partly because its preparation was not fully participatory.

In January 2022, the Government of Sierra Leone embarked on a process to jointly nominate TIWS and GRNP as its very first World Heritage property. This prompted a fresh review of the by then approved CoMP, so as to align it to the requirements of the Operational Guidelines for the Implementation of the World Heritage Convention.[17] A quick appraisal by a Team of experts undertaking a UNESCO Mission to Sierra Leone to support this nomination process[18], resolved that in its existing form, the plan had substantial gaps. For instance, it appeared (in its own right) to be heavily inclined towards involvement of local communities in the co-management of TIWS, perhaps reflecting the historical approach to managing protected areas in Sierra Leone (**see A.2**), and to better their issues and concerns of the time. However, it did not exhaustively address the fundamental issue of how TIWS's natural values - the very reasons for its preservation - could be better managed and sustainably preserved. Thus, aspects such as of Tourism, infrastructure development, resources protection and daily administrative operations, respectively, were addressed only in a fragmentary way or ignored altogether. To address this and other fundamental gaps in the planning process, a decision was reached to revise the 2020-2030 CoMP. Nonetheless, time constraints dictated that the plan be revised to at best align with the IUCN's resource manual "Management Planning for Natural World Heritage Properties", (2008).[19]

Although in its current form this IMP stops short of defining the operational details on the ground, it is nevertheless structured to allow for continuity on onward preparation of a comprehensive plan. The latter is expected to not only detail the baseline conditions of TIWS, but also to clarify how the management would be delivered on the ground and assessed. It will also entail 'SMART' targets to benchmark the desired future of Tiwai over the medium 10-year planning horizon. Operational details related to the provision of human, physical and financial resources, and responsibilities for supporting the efficient

[15] Tiwai Island Administrative Committee (TIAC) (2020). The Co-Management Plan of Tiwai Island Wildlife Sanctuary, 2020-2030. Prepared by AB, Karim A, Okoni-Williams and J Squire.
[16] Tiwai Island Administrative Committee (TIAC) (1989). Tiwai Island Wildlife Sanctuary General Management Plan. Sierra Leone.
[17] see IUCN (2008) Protected Area Programme. Management Planning for Natural World Heritage Properties. A Resource Manual for Practitioners. Gland. Switzerland.
[18] The Mission was carried out from 27 July-5 August 2022 and comprised of staff from The UNESCO World Heritage Centre and from the States parties of The United Kingdom, Japan and The United Republic of Tanzania.
[19] *Ibid.*

management of Tiwai will also be elucidated. Thus, on the whole, this IMP has been structured to encapsulate the interim generic requirements of a management plan for a natural World Heritage site, while at the same time setting the requisite ground for a comprehensive management plan as illustrated in **Figure B.2.1**.

UNESCO Requirements for an Interim Management Plan for a natural World Heritage Site

- *Commitment* to Implementing the Plan
- Initial Assessment and factual *statement of the condition of the property's natural values*
- A review of *issues and challenges* associated with maintaining the properties' values and integrity within its geographic and socio-economic context
- The *long-term ambition* of the Property i.e., its vision and objective
- The management *policies and measures* provided or to be introduced
- The financial and human *resources* to be provided in order to protect the properties integrity prior to completion of the complete plan
- Completion of the comprehensive plan *within a maximum of 2-3 years*

Source IUCN (2008) Protected Area Programme. Management Planning for Natural World Heritage Properties. A Resource Manual for Practitioners. Gland. Switzerland (emphasis added).

B.2 Function and Structure

This plan is meant to guide the effective management of TIWS resources and facilitate their sustainable uses and development during an *interim period*[20] of two years from 2023-2025. However, despite its 'interim' nature, it clearly sets forth the long-term ambition (or vision) of TIWS and the management strategies for its eventual realization. It also elucidates the enabling policy and legislative environment, as well as the institutional set-up for its effective implementation - backing on the continued firm historical commitment of the Government of Sierra Leone **(Plates A.1.1 & A.1.2**) to preserve TIWS. Although in its current form this plan stops short of defining the operational details on the ground, it is nevertheless structured to allow for continuity on onward preparation of a comprehensive plan. Such a plan is expected not only to detail the baseline conditions of the Island, but also to clarify how the management would be delivered on the ground and assessed. It will also entail SMART targets to benchmark the desired future of TIWS over the medium 10-year planning horizon (**Fig. B.2.1**). Operational details related to the provision of human, physical and financial resources, and responsibilities for supporting the efficient management of TIWS will also be elucidated.

B.3 Alignment of the Interim Plan with Tiwai Administrative Framework

In consideration of the main management issues confronting TIWS emanating from detailed stakeholder consultations conducted during the preparation of the 2020-2030

[20] This is the permissible Interim period to allow for the preparation of a 10-year detailed or Comprehensive Management Plan that fully responds to the World Heritage Committee Operational Guidelines requirements of a formal Management Plan for a Natural World Heritage Site

co-management plan - (see **section B.8** below), this IMP has been structured into four (4) 'Strategic Management Areas' of intervention as follows:

- Ecosystem Management
- Tourism Management
- Community Outreach
- Operations Management

It is anticipated that addressing these key areas will help attain TIWS's overall purpose and sustainably maintain the values for which it was established. Structuring the plan into these four broader strategic areas of management intervention is meant to not only enable a clear understanding of the prevailing issues, but also to ease the administration of the required interventions. This will in turn aid to build a sense of collective responsibility, ownership, and clear accountability by TIWS staff on the ground.

B.4 Strategic and action plan structure

Best practice in strategic planning (see e.g., Fuertes et al. 2020)[21] dictates a series of logically linked long-term (20-30 year) Vision, medium-term (10-year) Programs and/or Strategies, each of which should then nest a (3-year) Action plan and a corresponding (1-year) Operational (or activity plan) in that order (**Figure B.4.1**). In addition, for the plan to be both relevant and realistic, it should provide for a clear linkage of its operations (or activities) to the (annual) budgetary cycle. Such a structure ensures that the plan retains the longer-term strategic vision while at the same time providing the required flexibility and responsiveness to the changing priorities and management needs on the ground. Understandably, this IMP process could not be extended to the operational (or activity) level at this time - as explained earlier. Nevertheless, it provides for a set of clear strategies, objectives and targets that are envisaged to feed into the details of the impending CMP.

B.5 Logical Framework Approach

This IMP also follows a 'Logical Framework Approach' (LFA), which is a widely accepted principle of choice in development project planning. The LFA provides for an efficient, accountable, and logical rationale for planning resulting in a plan that can be more effectively and efficiently implemented, as well as more easily monitored and evaluated (e.g., Rodriguez-Rivero et al. 2020)[22]. As already stated, the main feature of the LFA is the explicit and logical linkages that are established between the long-term strategies,

[21] Conceptual Framework for the Strategic management: A literature review-descriptive. Fuertes G, Alfaro M, Vargas Manuel, Gutierrez S, Ternero R & Sa J (2020). *Hindwai Journal of Engineering* https://doi.org/10.1155/2020/6253013

[22] Rodríguez-Rivero, R., Ortiz-Marcos, I., Ballesteros-Sánchez, L., Mazorra, J., Sánchez-Naranjo, M.J. (2021). The Logical Framework Approach, Does Its History Guarantee Its Future? In: Ayuso Muñoz, J.L., Yagüe Blanco, J.L., Capuz-Rizo, S.F. (eds) Project Management and Engineering Research. Lecture Notes in Management and Industrial Engineering. Springer, Cham. https://doi.org/10.1007/978-3-030-54410-2_35

medium-term objectives, short-term action plans, and ultimately the management tasks (or activities).

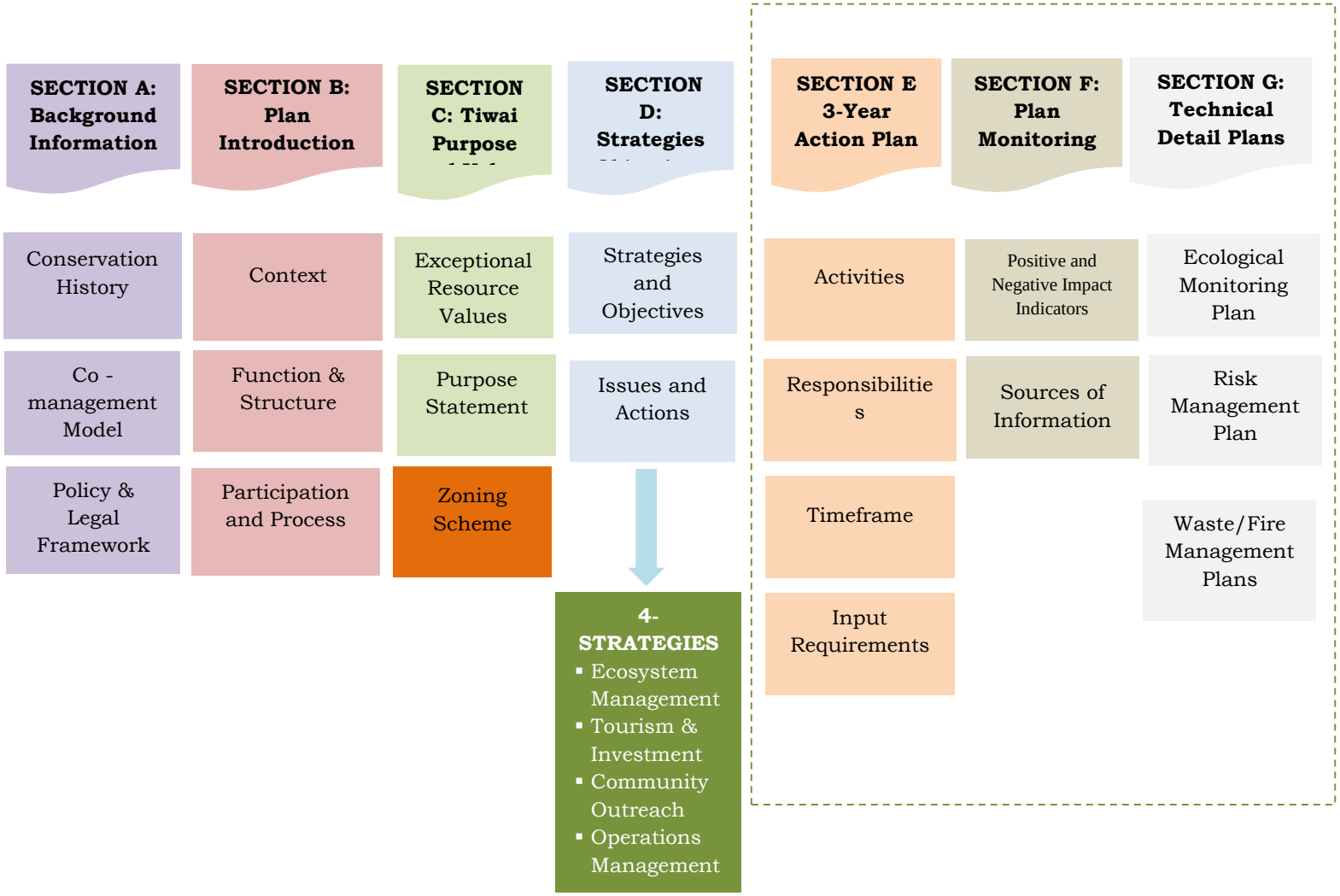


Figure B.2.1 Schematic presentation of the Interim Plan Structure incorporating sections A-D. Sections E-F (dotted frame) will be completed during the preparation of a comprehensive Management plan of which Sections A-D provide the foundations. Note also that the 'zoning scheme' item will also await preparation of comprehensive plan

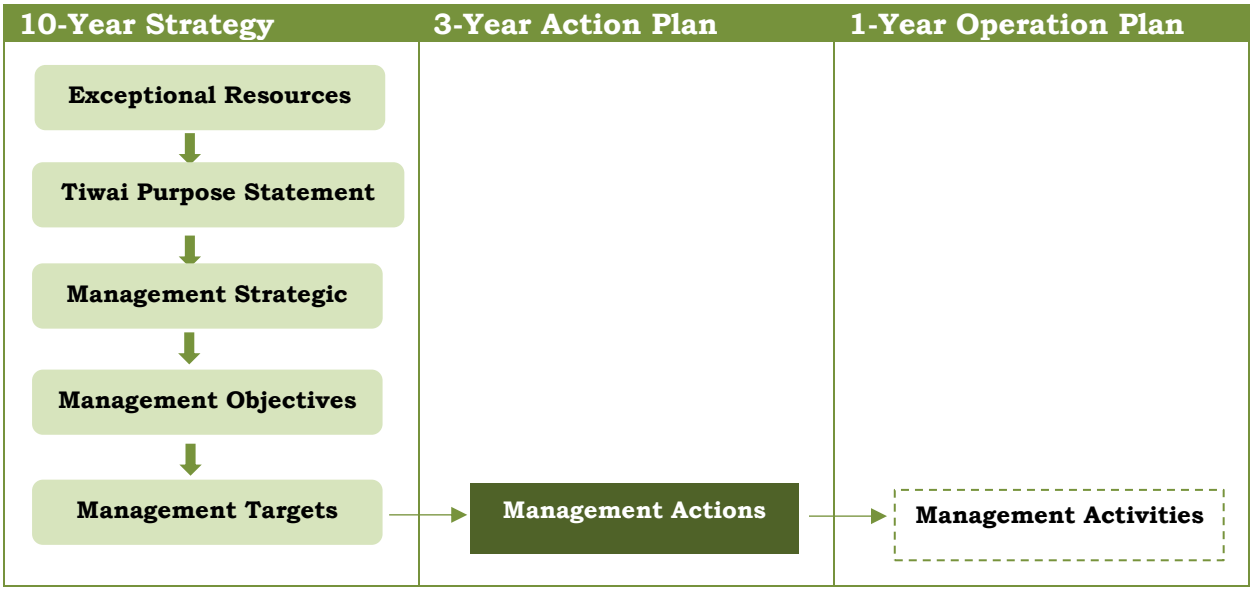


Figure B.4.1: Linkages between the three planning levels (Strategies, Actions and Activities)

B.6 Stakeholder analysis

With regard to stakeholder participation, this IMP borrows substantially from its 2020-2030 CoMP predecessor. At an early planning stage, the CoMP, created a list of 17 stakeholder groups for subsequent consultations. These were then assigned into three 'categories' based on their anticipated level of participation in the planning process (**Table B.6.1**).

Table B.6.1: Identified stakeholder groups

	Category	Description	Groups identified
1	**Key or Primary stakeholders**	The most important groups of stakeholders whose activities or policies directly impact the Island. They have voting rights on critical decisions affecting the management of the island. They may also form the core membership of the future management committee for the Sanctuary	▸ The Tiwai Island Communities – the Paramount Chiefs and local community representatives ▸ National Protected Areas Authority (NPAA). ▸ Pujehun District Council ▸ Kenema District Council ▸ Environmental Foundation for Africa (EFA) ▸ Njala University ▸ Any NGO working in the area
2	**Secondary stakeholders**	This group of stakeholders prepare policies and undertake activities that could affect the island, but they do not play direct roles in the management and administration of the island.	▸ The Environment Protection Agency (Ministry of Environment and Climate Change) ▸ Forestry Division, Ministry of the Environment and Climate Change

			▸ Ministry of Tourism and Cultural Affairs ▸ Ministry of Local Government ▸ Tiwai Community Committee ▸ Conservation Trust Fund (CTF) (NPAA) ▸ The Member of Parliament Barry Chiefdom (Pujehun District) ▸ The Member of Parliament Koya Chiefdom (Kenema District)
3	**Prospective or potential stakeholders**	This group of stakeholders are those who have been identified as being potentially important in augmenting the operations and investment potentials of the island. They may be co-opted into the island's management committee either as permanent members or on a rotational basis as and when required	▸ Carma Cola ▸ The Gola Rainforest National Park ▸ Academic/Research Institutions

For those stakeholders considered key, an attempt was made to understand their in-depth roles and responsibilities as potential forefront members in the Co-management of Tiwai (**Table B.6.2**)

Table B.6.2 Responsibilities of key Tiwai stakeholders

	Key stakeholder group	Responsibilities relevant to the management of TIWS
1	Government (represented by NPAA under the Ministry of the Environment)	▸ Lead entity tasked with the responsibility of protecting the natural ecosystem, especially areas designated with conservation of natural resources. ▸ Creates policies, laws and legislations, and legal security of the resources. Coordinates and fosters collaboration amongst the stakeholders, including the universities and local communities. ▸ Fosters interactions between institutions and individuals in planning, development, supporting, conflict management, local participation, and involvement. ▸ Interconnects the entire system of tourism and environmental activities for sustainable development.
2	Non-Governmental Organizations (NGOs)	▸ Influence the conservation efforts of Protected Areas ▸ Together with the private sector, promote ecotourism and attract visitors to TIWS ▸ Create environmental awareness within and outside the Tiwai Communities. ▸ Support the management of Protected Areas through project interventions for ecosystem and biodiversity conservation
3	Potential Investors	▸ Implement a range of activities relating to promoting tourism, tour guiding and non-exploitative community development initiatives.

		▸ Attract visitors to the island and provide enabling facilities for them. Stimulate local spending from visitors and provide opportunities for tourism initiatives involving local communities ▸ Provide mechanisms for mobilizing sustainable means of income to the TIWS programme and surrounding communities
4	Local communities	▸ Support protection and conservation efforts for the sustainable development of the Island ▸ Create the necessary local activities for attracting tourists to the Island. ▸ Complement (and support) government and other partners (NGOs etc.) efforts to promote sustainable conservation and livelihoods for the communities.
5	Academia (Njala University will incorporate other institutions as necessary)	▸ Carry out research (scientific, ecological, social, socio-cultural, anthropologic, impacts, etc.) on the Island. ▸ Produce educational materials both for the general public and academic communities. ▸ Create an enabling environment for research and attract researchers to the Island.
6	Local authorities	▸ Complement the efforts of the government and other stakeholders in assuring the security and maintaining the sanctity of the Island. ▸ Develop byelaws and ensure the communities are visitor-friendly. Provide strategic oversight that entails regular monitoring and supervision. ▸ Have the legal framework that would support the NGO's activities and participate in a regulated recruitment of the NGOs/Investors.

Having identified a wider range of TIWS stakeholders, using the Strengths, Weaknesses, Opportunities and Threats (SWOT) approach (see recent review by Benzaghta et al. 2021).[23] the initial planning Team then carried out a detailed stakeholder analysis as a basis for developing and implementing a simple communication strategy to facilitate their full participation during the consultative process as presented in **Table B.6.3**.

Table B.6.3: Stakeholder communication strategy

	Strategy	Description	Stakeholders
1	Involve	Key stakeholders invited to participate in and contribute to the planning issues through meetings	▸ The Tiwai Island Communities – the Paramount Chiefs and local community representatives ▸ National Protected Areas Authority (NPAA). ▸ Pujehun District Council

[23] Benzaghta MA, Elwalda A, Mousa MM, Erkan I & Rahman M (2021). SWOT analysis applications: An integrative literature review. *Journal of Global Business Insights 6*(1): 55-73. https://digitalcommons.usf.edu/globe/vol6/iss1/5/

			▸ Kenema District Council ▸ Environmental Foundation for Africa (EFA) ▸ Njala University
2	Consult	Important stakeholders who were actively consulted during the planning process and whose inputs were directly incorporated. Consultations were carried out through a one-to-one interview.	▸ The Environment Protection Agency (Ministry of Environment and Climate Change) ▸ Forestry Division, Ministry of Environment and Climate Change ▸ Ministry of Local Government ▸ Tiwai Community Committee ▸ Conservation Trust Fund (CTF) ▸ The Member of Parliament from Barry Chiefdom (Pujehun District) ▸ The Member of Parliament from Koya Chiefdom (Kenema District)
3	Raise awareness	Stakeholders who were kept informed about the progress in the planning process and given an opportunity to provide feedback but who were not directly involved or consulted.	▸ Carma Cola ▸ Ministry of Tourism and Cultural Affairs ▸ The Gola Forest National Park ▸ Any NGO working in the area
4	No action	Stakeholders for whom there was no immediate benefit in targeting for involvement in the planning process.	

B.7 Participation

The planning process adopted for the CoMP, therefore, involved a multilayered approach to participation. The objective was to provide an opportunity for as many key stakeholder groups and individuals as possible to contribute to the planning process in realistic and appropriate ways, commensurate with the appropriate policies of the Government of Sierra Leone [24]. The fundamental assumption here is that the free and robust participation of a wide spectrum of stakeholders during the preparation of the initial 2020-2030 CoMP is testimony to both their ownership of the planning process and a consequent commitment to the plan implementation to the time that this IMP was being prepared.

B.8 Consultation process

As already detailed before, the 2020-2030 CoMP was developed through a broader participatory process, following a detailed stakeholder analysis. The aim was to ensure that it has wider support amongst the various stakeholder groups and that it was both realistic and easily implementable at the end. The consultation process, held between August and September 2019 was two-phased, targeting both primary and secondary stakeholders. The first phase focused on understanding the perspectives of each of the

[24] See **Table A.3.1** for examples of these policies

eight communities living adjacent TIWS. This involved detailed questionnaire interviews, guided by a set of 16 pre-formulated 'leading' questions on various management issues of TIWS (see **Appendix 1-3** for details), followed by direct consultations with key members of each of these communities. The second phase of consultations also involved a two-tier consultation. Firstly, FGDs were held with key informants selected from each of the respective Chiefdoms and institutions and later, group consultations held with the rest of community members from all the respective Chiefdoms followed.

Where necessary, interviews and discussions were held in vernacular (*Mende* and *Krio*), later translated into English. FGDs involved 515 individuals from all the eight (8) local communities residing in the immediate vicinity of TIWS of which 54.2% were male and the rest (45.8%) female. Key informants involved a total of 40 people comprising of five (5) from each of the eight communities as per the following composition: Town/section Chief, women leader, youth leader, an elder and a religious leader (Imaam). On the whole, the consultations focused on exploring the stakeholder perspectives on the key management issues of TIWS, including their level of awareness on its existence, its legal status, their involvement in its activities, its conservation and management status, and its impact on community livelihoods. For a detailed description of the consultative process during the preparation of the CoMP, see **Appendices 1-3**.

The results of both stakeholder consultations described above, combined with extensive information gathered through literature survey led to the preparation of the 2020-2030 CoMP. This document thus presented an up-to date synthesis of key background information and an in-depth state of knowledge on TIWS at the time. It comprised basic information on issues such as: the status of fauna and flora, description of the physical environment of the Island, wildlife and aquatic resources, threats to the Island (including natural calamities), local community dependency on the Island, and Management and administration issues including infrastructure development and tourism services delivery.

B.9 Preparation and verification of the IMP

This IMP was prepared between January and April 2023. It involved a thorough re-organization of the 2020-2030 CoMP contents to reflect the long-term strategic management framework for TIWS. This entailed a comprehensive review of TIWS's purpose and resource values and the identification and prioritization of its main management issues and opportunities. It also involved the elucidation of any prevailing and imminent threats that are impacting or likely to impact on TIWS's values, respectively. The strategic interventions needed for achieving TIWS's purpose, together with an elaboration of the management objectives and targets have also been formulated for the management on the ground to focus on in the interim. While it proved exacting to engage all stakeholders originally present during the 2020-2030 CoMP preparation, their representation was nevertheless ensured during the preparation of this IMP. The Paramount Chiefs in particular, were key in representing their respective local community chiefdoms. Four (4) online discussions took place as the contents of the Draft

IMP evolved, which involved top government officials: Ministry of Tourism and Cultural Affairs, Ministry of Environment and Climate Change, NPAA, NU, EFA, GRNP and the Paramount Chiefs. At the end of March 2023, the final version of the IMP was again circulated widely and physically verified by key stakeholders, including the local communities through meetings that were arranged by EFA. This IMP is thus taken to reflect the current collective philosophy and approach to the management of Tiwai by its key stakeholders.

C. TIWAI PURPOSE AND VALUES

C.1 Physical Environment

The 1,200 ha Tiwai Island (**Figure C.1.1**) is the smallest component of the larger Gola-Tiwai Complex (**Figure C.1.2**). The later covers some 76,200-ha flanked by an additional 86,800 ha of buffer zone. Tiwai is 6.9 km long and 3.0 km wide, with a shoreline of approximately 21.9 km. It is generally low-lying, with an average elevation of about 120m asl (Conway 2013[25]; Oates et al. 1990[26]). Temperatures range from 21°C between December-January to 35°C (February-April). Climate is tropical, with an average annual rainfall of 2500-3000mm that is concentrated between May-October leaving December to March dry (Klop & Lindsell 2008)[27].

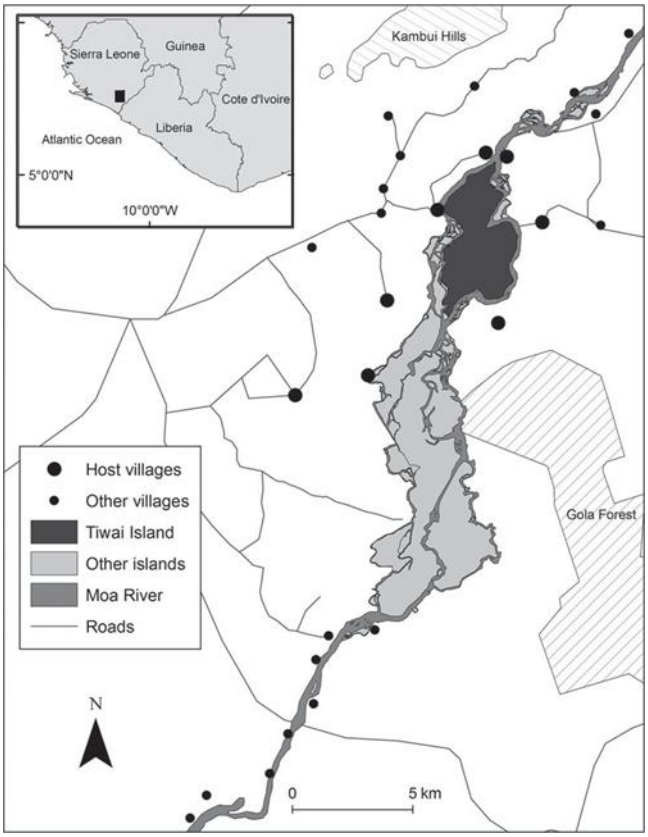


Figure C.1.1 Location of Tiwai Island Wildlife Sanctuary and the surrounding villages. Adopted from Conway et al. 2015.[28]

[25] Conway AL (2013). Conservation of the Pygmy Hippopotamus (*Choeropsis liberiensis*) in Sierra Leone, West Africa. University of Georgia, USA.
[26] Oates JF, Whitesides GH, Davies AG, Waterman PG, Green SM, Dasilva GL & Mole S (1990). Determinants of variation in tropical forest primate biomass: new evidence from West Africa. *Ecology*: *71*(1), pp.328-343.
[27] Klop E, Lindsell JA & Siaka A (2008) Biodiversity of Gola Forest. RSPB and CSSL, Sierra Leone.
[28] Conway AL, Hernandez SM, Carroll G, Green T & Larson LR (2015). Local awareness of and attitudes toward the pygmy hippopotamus *(Choeropsis liberiensis*) in the Moa River Island Complex, Sierra Leone. Oryx 49(3): 550-558.

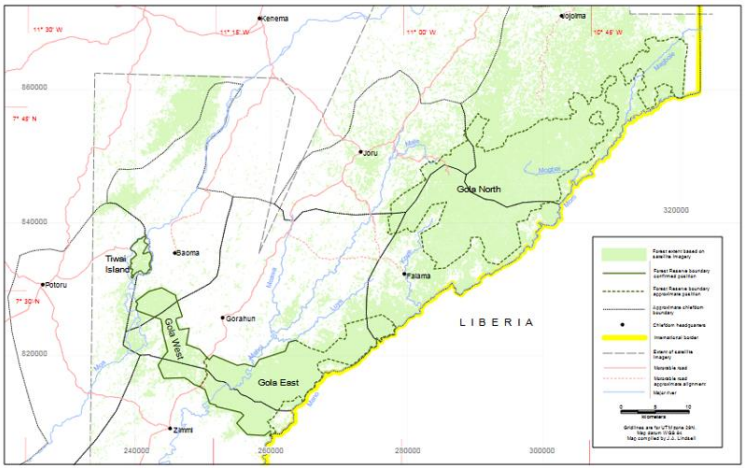


Figure C.1.2 Map of Tiwai Island within the larger Gola-Tiwai landscape[29]

There is a paucity of detailed information on the geomorphology of TIWS. However, as a component of the greater Gola landscape, it is described fairly abundantly in literature (see e.g., Klop & Lindsell 2008).[30] Underlying the Gola-Tiwai Complex expanse, are ancient crystalline rocks of the Precambrian period. The granite greenstone complex common in the area contains iron and magnesium-rich metamorphic rocks overlying a granitic basement rich in quartz (Wilson 1965)[31]. The soils are mostly freely draining granitic sand and gravels with varying proportions of lateritic gravel (Iles et al. 1993)[32] that are generally considered mineral deficient (Oates et al. 1990)[33]. TIWS is completely devoid of driver ants *Dorylus* sp. but heavily populated with termites *Zootermopsis* sp, which constantly clear organic matter from the soil surface (Molleman & Safia 2015)[34].

The bifurcating Moa River **(Figure C.1.3**) forms part of the scenically stunning features of the Island, which is connected to the greater Gola-Tiwai River drainage watershed complex. At its peak, it flows enormously around the TIWS, functionally splitting the terrestrial environs of the adjacent eight local communities from it. Thus, although the local villages are located fairly close to the TIWS, to access it during its high waters one must cross the river by boat, but at times the flow may be so powerful as to become impassable. During the dry season, however, the riverbed may become virtually bare so that one can relatively easily cross on foot at a few selected locations. Moa River, therefore, presents an important ecological interface functionally 'buffering' the 'core' of

[29]Klop E Lindsell JA and Staka AM (2010) The birds of Gola Forest and Tiwai Island, Sierra Leone. Malimbus 32:33-58
[30] *Ibid.*
[31] Wilson NW (1965) Geology and mineral resources of part of the Gola Forest reserves, Sierra Leone. *Bulletin No. 4, Geological Survey of Sierra Leone*. Government of Sierra Leone
[32] Iles M, Savill P & Koker G (1993) *Gola Forest reserves, Sierra Leone: interim management plan*. Unpublished manuscript, Forestry Division, Sierra Leone and RSPB, UK
[33] *Ibid.*
[34] Molleman F & Safia S (2015) Predating on insects on Tiwai, Sierra Leone. *Entomologische Berichten* 75 (1): 15-21

TIWS from village land and is formally recognized as such by the adjacent local communities[35].

Plate C.1.1 The Moa River divides the community land (left) from 'core' TIWS (right). Note the healthy riparian riverine forests which dominates both sides of the river.

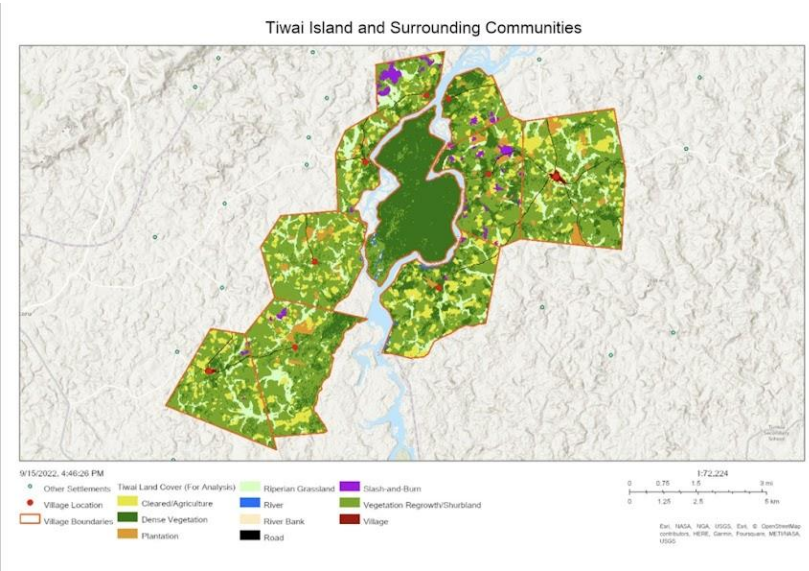


Figure C.1.3 TIWS sandwiched within the surrounding community land. Note that Moa River as it bifurcates the Island naturally buffers it from the local community lands

According to an existing formal agreement, mining is prohibited in the buffer zone, while subsistence fishing for local consumption is permissible. However, details on prescriptions on resource uses in the buffer zone awaits the preparation of a CMP. By its

[35] A formal agreement between Tiwai and the eight (8) surrounding local community villages has been reached for Moa River as a buffer zone for TIWS, meaning that the inner boundary of the buffer zone is the shoreline of the TIWS, regardless of water level, while the outer boundary is the bifurcating arms of the Moa River on opposite bank of TIWS.

very nature, therefore, TIWS's integrity is strongly assured by its distinct, self-constrained configuration of low perimeter to surface ratio that is naturally isolated from immediate large-scale anthropogenic disturbances.

C.2 Vegetation

The historic vegetation cover on TIWS is a remnant of the Upper-Guinean Forest biodiversity hotspot (Beentje 1994),[36] which is considered a center for plant diversity and endemism (Bakarr et al. 2001)[37]. The Upper Guinean Forest of West Africa is also one of the WWF's Global 200 Ecoregions (Olson & Dinerstein 1998) [38] and a BirdLife International designated Endemic Bird Area. Vegetation on TIWS is composed broadly of a homogeneous high canopy moist forest. However, finer vegetation elements also exist, which should be considered within the broader biodiversity management context. Over 700 plant species grow on TIWS of which 34 are listed on the IUCN Red List. One of these is critically endangered and 14 (42%) vulnerable (Table C.2) pre-dominated by trees of the evergreen forest.

Plate C.2.1 TIWS is dominated by continuous high canopy evergreen forest

Characteristic tree species include *Heritiera utilis, Brachystegia leonensis, Calpocalyx aubrevillei* and *Sacoglottis gabonensis*. Along the edges of the island where it is more or less riparian forest, *Uapaca guinensis* and *Protomegabaria stapfiana* are common. Moist semi-deciduous forest also occurs in places dominated by species such as *Cynometra leonensis, Parinari excelsa, Parkia bicolor,* and *Piptadeniastrum africanum*. There are also

[36] Beentje HJ, Adams B & Davis SD (1994). Regional overview: Africa. Pp. 101-148 In: Davis SD, Heywood VH & Hamilton AC (eds.*) Centres of plant diversity: a guide and strategy for their conservation*, Vol. 1. IUCN, Cambridge
[37] Bakarr M, Bailey B, Byler D, Ham R, Olivieri S & Omland M Eds (2001*) From the Forest to the Sea: Biodiversity Connections from Guinea to Togo*. Conservation International, Washington, DC
[38] Olson DM & Dinerstein E (1998). The Global 200: a representation approach to conserving the Earth's most biologically valuable ecoregions. *Conservation Biology 12: 502-515*.

patches of freshwater swamp forests with Raphia palm and characteristic tree species such as *Uapaca* spp, *Nauclea diderrichii* and *Newtonia duparquetiana* present.

TIWS was characterized by a history of extensive farming during the 20th Century, but this declined by 1928. By the 1980s, substantial forest regeneration had occurred in 30% of the Islands area and 10% of its surface covered by *Raphia* swamps, while 60% was occupied by 15-25m high old-secondary forest (Oates et al. 1990)[39].

Table C.2.1 List of plant species on the IUCN Red List[40]

Species	IUCN Red List (2022)
Acroceras zizanioides	LC
Albizia ferruginea	NT
Anisophyllea meniaudi	LC
Anopyxis klaineana	VU
Aulacocalyx sp. (A. divergens?)	VU
Berlinia occidentalis	VU
Cola simiarum	VU
Copaifera salikounda	VU
Cynometra leonensis	NT
Cyperus remotispicatus	DD
Daniellia ogea	NT
Dialium dinklagei	LC
Didelotia afzelii	VU
Drypetes afzelii	VU
Entandrophragma angolense	NT
Eriocaulon adamesii	CR
Garcinia kola	VU
Gilbertiodendron bilineatum?	VU
Hygrophila barbata	DD
Irvingia gabonensis	NT
Ledermanniella tenuifolia	DD
Milicia regia	VU
Millettia warneckei	VU
Nauclea diderrichii	NT
Okoubaka aubreviillei	EN
Omphalocarpum ahia	EN
Placodiscus pseudostipularis	EN
Placodiscus splendidus	VU
Raphia palma-pinus	NT
Raphia sudanica	NT
Scleria boivinii	LC
Stonesia heterospathella	DD
Terminalia ivorensis	VU
Tristemma involucratum	VU

*CR=Critically Endangered, EN=Endangered, VU=Vulnerable, NT=Not Threatened, LC=Least Concern, DD=Data Deficient

Currently, this high canopy forest and the associated flora is all continuous but broken up in just a few areas. Recent assessment of forest cover on TIWS based on high

[39] *Ibid*
[40] Kumiko Y (Unpubl.) Preliminary plant Species Inventory list compilation for TIWS and GRNP

resolution satellite imagery analysis,[41] indicate that apart from natural tree falls, forest cover has remained relatively stable for the years 2013 through 2020. This is in contrast to the surrounding community landscape which shows a dynamism of coppice regeneration.

C.3 Animals

TIWS is ecologically connected with the GRNP, to which it bears a strong taxonomic affinity of the biota. Unfortunately, decades of research there have concentrated on but a few species, taxa and ecological processes. There is thus a scarcity of published information on the general natural history of the area in the form of wider species lists. This is in contrast to the adjacent GRNP, where recent demands of biodiversity offsets, REDD+ and carbon credits have created a need for broad systematic species inventories.

However, the GTC landscape, of which TIWS is part, harbors some 158 mammal species of which 20 are globally threatened, and 452 bird species of which 11 are globally threatened. In addition, it is also habitat to 33 fish species (Kumiko (Unpubl)).[42] The relative scarcity of species inventory data for TIWS precludes detailed assessments of its biodiversity significance over the longer term, thus presenting an apparent gap in knowledge that should be addressed in future. Nevertheless, TIWS harbors one of the densest primate populations on earth - comprising of 11 species. These include the western Chimpanzee *Pan troglodytes verus*, a critically endangered species, which by 2017, had suffered an 80% decline in population across its entire geographic range (Kuhl et al. 2017)[43]. The IUCN Red list status of these primate species is given in **Table C.3.1**.

Table C.3.1 IUCN Red list status for primate species inhabiting TIWS

Common Name	Species	IUCN Red List Status*
Western Chimpanzees	*Pan troglodytes verus*	CR
Diana Monkey	*Cercopithecus diana*	EN
Red Colobus Monkey	*Procolobus badius*	VU
Sooty Mangabey	*Cercocebus atys*	VU
Black and White colobus Monkey	*Colobus polykomus*	NT
Campbell's Monkey	*Cercopithecus campbelli*	LC
Mona monkey	*Cercopithecus mona*	LC
Olive colobus Monkey	*Procolobus verus*	LC
Lesser Spot-nosed Monkey	*Cercopithecus petaurista*	LC

*CR=Critically Endangered, EN=Endangered, VU=Vulnerable, NT=Not Threatened, LC=Least Concern

Unfortunately, there lacks firm density estimates for Chimpanzees specifically for TIWS. However, in an extensive review of 12 sites across West Africa, Ganas 1990[44] reported the density for GRNP (an ecological continuum of Tiwai) as 0.27 Individuals/Sq.km, which falls well within the West African regional range. The primate biomass at TIWS,

[41] Environmental Resources (ERM) (Unpubl.)
[42] *Ibid.*
[43] Kühl HS, Sop T, Williamson EA, et al. (2017) The Critically Endangered western chimpanzee declines by 80%. *Am J Primatol.* https://doi.org/10.1002/ajp.22681
[44] Ganas (2009)

has been estimated at between 1,229 and 1,529kg/km^2, one of the highest in the world (Oates et al. 1990)[45]. A recent review by Binama (pers. Comm) found that this biomass is indeed still among the highest of known communities worldwide. Excluding chimpanzees, five (5) primate density studies have also been conducted on TIWS since the 1980s, including two before and three after the civil war, respectively, following a methodology of Whitesides et al. (1988). Based on these studies, Musa et al. (2020)[46] estimated the population trend of seven (7) primate species on TIWS for the years 1982-2018 (**Table C.3.2**). They reported a particularly sharp decline soon after the war, followed by a fairly rapid (decadal) recovery of the populations to baseline levels of the 1980's, at which point they were considered amongst the highest in the world Oates et al. (1990)[47]

Table C.3.2 Group densities of seven primate species on TIWS from 1982-2018 (Musa et al. 2020)[48].

Species	Year				
	1982-84[49]	1991[50]	2004[51]	2012[52]	2018[53]
Cercocebus atys	1.1±0.23	1.55	0.27	1.3±0.18	0.99
Cercopithecus campbelli	2.8±0.33	3.25	0.06	2.0±0.33	1.03
Cercopithecus diana	2.4±0.23	1.60	0.58	4.4±0.36	1.38
Cercopithecus petaurista	4.0±0.57	1.75	0.30	3.1±0.23	2.19
Colobus polykomos	5.0±0.39	1.90	0.54	5.2±0.35	1.80
Piliocolobus badius	1.4±0.26	0.90	0.79	3.5±0.45	1.98
Procolobus verus	1.3±0.26	Nd[54]	Nd	1.1±0.11	0.18

TIWS also boasts of a wide taxonomic array of other wildlife species. These include the flagship endangered pygmy hippo *Choeropsis liberiensis*, which Conway et al. (2015)[55] found to be most concentrated around the TIWS following a comprehensive survey of the entire Sierra Leone. There are also 12 species of forest antelopes and bovines (McCollum et al. 2018[56]). Other flagship species include duikers and the red river hog *Potamochoerus porcus* (McCollum et al. 2017[57]), spotted necked Otter *Lutra maculicollis* (Grubb et al.

[45] Ibid.
[46] Musa J, Abu-Bakarr I, Wadsworth RA & Bakarr MI (2020) Changes in the abundance of diurnal primates in the Tiwai Island Wildlife Sanctuary, Sierra Leone. *African Journal of Ecology (under review).*
[47] *Ibid.*
[48] *Ibid.*
[49] Whitesides GH, Oates JF, Green SM, Kluberdanz R (1988). Estimating primate densities from transect in West African rain forest. A comparison of techniques. *Journal of Animal Ecology* 57: 345-367.
[50] Fimbel C (1994) The relative use of abandoned farm clearings and old forest habitats by primates and forest antelopes at Tiwai, Sierra Leone. *West Africa Biological Conservation* 70: 277-286.
[51] *Ibid.*
[52] Zepou IOF (2012) *Diurnal primate species abundance on Tiwai Island (Sierra Leone): A comparison of pre- and post-war data.* Unpublished MSc. Thesis. Durrell Institute of Conservation and Ecology, University of Kent, England.
[53] *Ibid.*
[54] No groups seen
[55] Conway AL, Hernandez SM, Carroll JP, Green GT & Larson LR (2015) Local awareness of and attitudes toward the pygmy hippopotamus (*Choeropsis liberiensis*) in the Moa River Island Complex, Sierra Leone. *Oryx 49 (3): 550–558*
[56] McCollum KR, Belinfonte E, Conway AL & Carroll JP (2018) Occupancy and habitat use by six species of forest ungulates on Tiwai Island, Sierra Leone. *Koedoe: African Protected Area Conservation and Science*, *60*(1): 1-5.
[57] McCollum KR, Conway AL, Lee MB & Carroll JP (2017) Occupancy and demographics of red river hog *Potamochoerus porcus* on Tiwai Island, Sierra Leone. *African Journal of Ecology 55*(1): 47-55.

1998[58]) and the endangered white bellied pangolin *Phataginus tricuspis* (Davies 1987)[59]. Bird diversity is also extremely high including scores of water birds, hornbills, Gola malimbe and Birds of prey (see e.g; Davies 1987)[60]. TIWS is also equally rich in fish, reptile amphibian and invertebrate diversity.

C.4 Exceptional Resource Values (ERV)

ERVs are the biophysical features of a protected area that are considered especially important for maintaining its unique ecological character and functions, and which provide outstanding benefits (social, economic, and aesthetic) of local, national, and international significance. A clear identification of TIWS's ERVs, therefore, provides a foundation for formulating its purpose statement, identifying management problems and opportunities, and generating effective management interventions in terms of clear strategies, objectives, and targets. The ERVs for Tiwai are given in **Table C.4.1** below.

Plate C.4.1 TIWS is rich in primate species

Table C.4.1 ERVs of TIWS[61] by *natural, scenic, social, and cultural* categories

Category	Exceptional Resource Value (ERV)
Natural	Primate population Floral diversity Self-regulating forest system functionally linked to Gola Rainforest National Park Rare, threatened, and endangered species Migratory birds and their habitats Fish diversity
Scenic	Solitude and pristine Island environment Moa river system functionally connecting with the greater Gola watershed system
Social	Direct economic benefits to local communities National economic revenues from tourism Catchment and fish source area for adjacent communities
Cultural	Traditional and cultural values and sites

[58] Grubb P, Jones TS, Davies AG, Edberg E, Starin ED & Hill JE (1998) *The mammals of Ghana, Sierra Leone and the Gambia.* The Tendrine Press, St. Ives.
[59] Davies AG (1987) *The Gola Forest Reserves, Sierra Leone conservation and forest management.* IUCN, Gland, Cambridge, UK. 1987. xx + 126 pp
[60] Davies AG 44 *Ibid*
[61] Identified during the co-management planning consultative process

C.5 Prioritization of Ecosystem components and Threats

TIWS management is envisaged to maintain all components and processes of a naturally evolving Island ecosystem. However, due to the inherent complexity of these natural systems and the limited resources available, it is not possible to monitor and manage each and every individual ecosystem component. In response, an ecosystem Conservation Action Planning (CAP) approach of The Nature Conservancy[62] has been adopted to identify representative ecosystem components and prioritize strategic decisions regarding their conservation. This simple but proven approach is expected to ensure the optimal allocation of time and resources for implementing conservation strategies so as to protect and monitor the health and functions of the TIWS ecosystem over the longer term. The key features and outputs of this planning processes is described below.

C.6 Tiwai conservation Targets and Kea Ecological Attributes

In the context of this IMP, the Conservation Targets connotes the various spatial scales and levels of biological organization of the ecosystem values and functions - from ecological systems and processes to individual species. These are presented in **Table C.6.1** which in essence, are a subset of the ERVs presented in **Table C.4.1**. Together, they encapsulate the unique biodiversity of the TIWS ecosystem and the components that require special management actions. The underlying assumption behind establishing these conservation targets is that if they are truly representative, focusing efforts on their conservation will also ensure the conservation of all co-occurring ecosystem components and therefore the management of a healthy ecosystem. Stakeholder consultations during the planning process and available literature indicate that the conservation Targets of TIWS are so far in good condition and that to a larger extent, direct threats on them are minimal or non-existent. This means that on the whole, the state of conservation of Tiwai remains relatively intact as of now. However, this seemingly positive conservation outlook is no reason for complacency on the part of TIWS management as its future remains uncertain - especially so, given the increasing anthropogenic pressures on its island restricted resources.

Table C.6.1 Conservation Targets of Tiwai

	Target	Ecosystem level
1	Moa River	Ecosystem
2	Close canopy forest	
3	Riverine Forest	Community
4	Monkey population	
5	Chimpanzee	
6	Diana monkey	Species
7	Pygmy hippo	

[62] The Nature Conservancy (2007) *Conservation Action Planning Handbook: Developing Strategies, Taking Action and Measuring Success at any Scale.* The Nature Conservancy. Arlington, VA.

The Key Ecological Attributes (KEA) are the factors that most clearly define or characterize the conservation targets. They include factors pertaining to conservation of the targets' biological composition, spatial distribution, biotic and abiotic interactions, and ecological connectivity. KEAs are sensitive to change and thus provide a good basis for monitoring of the overall health of their respective conservation targets. **Table C.6.2** gives the co-occurring subsidiary Targets and the KEAs alongside the seven conservation Targets.

Table C.6.2 Tiwai Key Ecological Attributes (KEAs)

	Conservation Target	Subsidiary Target	Key Ecological Attribute (KEA)
1.	Moa River	Fish population Fish composition	Water flow Water quality
2.	Closed canopy forest	Invertebrate species Reptiles & amphibians Mammal species Flagship tree species Food plants for primates	Cover Structure Composition Tree falls Dead wood
3.	Riverine forest	Invertebrate species Migratory birds *Raffia* species	Cover Composition, structure, cover, tree falls Structure Dead wood
4.	Other monkeys		Suitable habitat Population size Population structure Genetic diversity
5.	Chimpanzee		Population size Population structure
6.	Diana monkey		Population size Population structure
7.	Pygmy hippo	Edible water plants	Population size Population structure Suitable habitat (marshes)

C.7 Ecosystem Threats

For this IMP an ecosystem threat is defined as any direct or indirect factor resulting either directly or indirectly from human activities, that has the potential to destroy, degrade, or impair a Conservation Target in the next 10 years. The existing and potential myriad of conservation threats confronting TIWS stems from both its smaller size and the consequent mounting pressures of resources use by the burgeoning adjacent local community population. The removal of these threats or their effective control should allow for the sustainable maintenance of the ecosystem health of TIWS over the longer term (see **Section D**). **Table C.7.1** is a list of these threats together with a brief description of how they are likely to impact the TIWS conservation Targets. **Table C.7.2** gives an analysis of the magnitudes of such impacts.

Table C.7.1 Potential Impacts of identified Conservation Threats on the identified conservation Targets

Target	Threat	Impact Description
Moa River	Reduced water flow	Moa river is a major water supply source for the Island and a livelihood factor for adjacent communities. It is also a natural buffer zone for the Island. Although the water quality and flow dynamics data is not immediately available, the scarcity of water due to unsustainable land-use practices or climate change will severely affect the water regime of the ecosystem, the entire Gola-Tiwai landscape and the fishery which supports the local communities for food.
	Deterioration of water quality and aquatic biodiversity	Unsustainable upland use practices may lead to excessive soil erosion, siltation and influx of agricultural chemical effluents downstream into the Moa-river, severely affecting both aquatic (fish) life and terrestrial (birds) biodynamics within the Island and beyond. Use of poor fishing gears may also lead to overfishing or depletion of fish stocks thus disturbing the aquatic biodiversity dynamics of Moa River.
	Riverbank erosion	Indiscriminate harvest of timber and forest products may expose the riverbanks to excessive erosion which may disturb the natural flow course of the river with disastrous environmental consequences.
	Mining	Artisanal or commercial mining may involve use of heavy metals that may adversely interfere with the biodiversity values of the river. Dredging negatively affects water quality to a far greater effect than agriculture.
	Poor waste disposal	Environmental pollution of the Island including from tourism use may affect the feeding behaviour of especially the primate species as they freely access food waste. Waste water discharge into the Moa River may also disturb its aquatic ecology with far reaching consequences such as on the avifauna, and fish.
	Climate change	Changed global climate patterns may adversely disturb the ecological and biodiversity dynamics on the Island, by making them prone to increased environmental vulnerabilities and risks such as excessive floods, forest fires and tree falls.
Closed canopy forest	Deforestation	Deforestation of a sizable part of Tiwai has taken place in the past although forest regeneration has taken place after many years of fallow. Deforestation severely disturbs the structure, diversity and recruitment dynamics of the forest.

Target	Threat	Impact Description
	Wildfires	Wildfires are disastrous in forest ecosystems as they kill trees and the understory biodiversity.
	Tree falls	At least two devastating storms have occurred in Tiwai over the previous 10 years, leading to far reaching forest structural damage and gaps., They have also substantially damaged the Island infrastructure. While tree falls are mostly natural events, their incidence may increase beyond sustainable levels as a result of climate change.
	Invasive species	There is potential for introduction of exotic invasives on the Island through dispersal of seeds from upland agricultural lands by Moa River. Also, accidental or deliberate animal releases on the island is a possibility.
Riverine forest	Decline in *Raffia*	*Raffia* is one of the main non-timber products that is selectively harvested by the Communities for making handcrafts. Controlled harvests are needed to avoid their extinction
	Decline in hippo habitats	Pygmy hippos occupy rather specialized wetland habitats at Tiwai but also make use of habitats on the mainland where they invade and trample farms for search of pumpkin. and rice. There is potential, therefore, for human-wildlife conflicts.
	Decline in migratory birds	Migratory birds require specialized wetland conditions, which need to be safeguarded from destruction.
	Wildfires[63]	Wildfire eruptions may instantly and irreversibly destroy larger proportions of biodiversity of especially the fragile forest ecosystem with disastrous consequences.
Monkeys	Poaching	Poaching reduces the population of monkeys and disturb recruitment patterns.
Chimpanzee	Poaching	Poaching reduces the population of this critically endangered species and disturb recruitment patterns.
	Diseases	At least two major eruptions of Ebola have erupted in the past 5 years, plus a more recent COVID-19 pandemic. These diseases are a major public health concern with substantial negative effects on tourism visitations and revenue. Primates are potentially susceptible to the especially zoonotic respiratory ailments affecting humans (such as pneumonia). The highly interactive researchers and tourists are a particularly vulnerable group.

[63] See also explanations under *Moa River*

Target	Threat	Impact Description
Diana monkey	Poaching	Poaching reduces the population of this endangered species and disturb its recruitment patterns.
Pygmy hippo	Poaching	Poaching reduces the population of this endemic species and disturb its recruitment patterns.
	Human-Wildlife Conflicts	Primates and other wildlife crossing the Moa riverbed during low flows may raid crops in adjacent community land leading to retaliatory human-wildlife conflicts.

Table C.7.2 Analysis of impacts of threats on specific targets at TIWS (for descriptions of severity and scope levels, see Table C.8). Overall Impact rating: (++++) Severe (+++) High (++) Medium (+) low

Conservation Target	Threat	Severity	Scope	Overall
Moa River	Reduced flow	+	+	+
	Deterioration of quality	+	+	+
	River bank erosion	+	+	+
	Mining	**++++**	++	++++
	Poor waste disposal	+	+	+
	Climate change	+	+	+
Closed canopy forest	Deforestation	++++	++++	++++
	Wildfire	+	+	+
	Invasive species	++	+	++
Riverine forest	Decline in *Raffia*	+	+	+
	Decline in Hippo habitats	+	+	+
	Decline in migratory birds	+	+	+
	Wildfire	++	++	++
Monkeys	Poaching	++++	+	++++
Chimpanzee	Poaching	++++	+	++++
	Diseases	++	+	++
Diana Monkey	Poaching	++++	+	+
Pygmy hippo	Poaching	++	++	++
	Human-Wildlife conflicts	+	+	+

It is obvious from **Table C.7.2** that some threats appear to affect more than one conservation Target. To simplify the visualization of this complexity of threat-target relationships, a threat analysis matrix has been developed (**Table C.7.3**), which indicates that poaching, deforestation, and mining are by far the most potentially intense and pervasive cross-cutting threats likely to affect all the seven Conservation targets of Tiwai, the remainder being specific to particular targets at lower levels of severity and scope.

Table C.7.3 Threat Analysis Matrix for Tiwai

Targets / Threats	Moa river	Canopy Forest	Riverine Forest	Monkeys	Chimpanzee	Diana Monkey	Pygmy Hippo
Water scarcity							
Water Pollution							
River bank erosion							
Mining							
Poor waste disposal							
Deforestation							
Fire							
Tree falls							
Alien species invasion							
Habitat decline							
Poaching							
Diseases							
Human-wildlife conflicts							
Land-use malpractices							
Climate change							

KEY

Threat level on Conservation Target	**Severe**	**High**	**Medium**	**Low**
Severity (damage)	Destroy or eliminate	Seriously degrade	Moderately degrade	Slightly impair
Scope (extent)	Pervasive	Widespread	Localized	Very localized

C.8 TIWS Purpose Statement

The Purpose Statement summarizes the importance of the protected area based on the Exceptional Resources it contains (see **Table C.4.1**), historical considerations and prevailing national and local policies. In this context, TIWS purpose statement explicitly recognizes the important role of Tiwai Island in the lives and livelihoods of neighboring communities, in addition to its national and international role, while reflecting the need to safeguard its social-ecological and cultural Exceptional Resource Values (see **Table C.4.1**).

Supplemental and complementary purposes of the TIWS are:

- To safeguard TIWS's ecosystem as an area of local, national, regional, and international importance;
- To optimize its long-term economic benefits to the nation through sustainable, low impact utilization that maintains the ecosystem's aesthetic beauty;
- To promote and maintain an effective and mutually beneficial co-management partnership with neighboring local communities;
- To promote all areas of historical and cultural importance; and
- To maintain and promote its scientific research and educational functions.

TIWS Purpose Statement

To sustainably preserve TIWS with its threatened and endemic primate assemblages, pristine forests and riverine systems as a global treasure within its wider ecological landscape, while sustaining the social-economic needs of the local communities and supporting the national economy.

The fulfilment of TIWS's purpose and the maintenance of its ERVs will be addressed in this IMP through the implementation of Management Strategic interventions focusing on the following four (4) areas as detailed in **Section D**.

- Ecosystem Management
- Tourism Management
- Community Outreach
- Operations Management

C.9 Zoning scheme

The TIWS Zoning scheme will be a necessary component that will need to be incorporated in the envisaged comprehensive management planning process. It will serve to provide a framework for achieving and reconciling the twin management needs of protecting the natural qualities and environment of TIWS and regulating and promoting visitor and other uses. Currently, there is an informal scheme comprising of three (3) zones: eco-tourism, research, and wilderness. These will have to be reviewed during the preparation of the CMP in line with this IMP. The established zones will identify areas where similar types and levels of use and management emphases are applied, based on TIWS's purpose, its ERVs, and appropriate uses and management strategies described in detail in **Section D** below. For ease of reference, as much as possible, zone boundaries will be aligned to follow the existing physical landforms such as river or stream banks, forest lines, hills, or forest trails.

D. STRATEGIC MANAGEMENT OPTIONS

STRATEGY D.1 ECOSYSTEM MANAGEMENT

TIWS is envisioned as a stakeholder-supported, naturally thriving and ecologically self-sustaining natural ecosystem that is integrated within the greater Gola-Tiwai landscape, able to support the local livelihoods and generate national socio-economic and cultural benefits. To realize this long-term ambition, which is reflected in its collective vision of TIWS stakeholders and partners, a set of four (4) strategic intervention areas have been formulated focusing on enhancing the management of: Ecosystem, Tourism, Community Outreach and Operations, respectively. These strategic options together with their respective Objectives and Targets [64] are described below while the formulation of detailed operational phases of interventions (actions and activities) awaits a CMP.

TIWS vision statement

TIWS is a globally recognized self-sustaining natural conservation entity, supporting viable biodiversity and providing a combination of ecosystem services at the landscape level for the benefit of local human populations, the nation and the international community as a whole

The prioritized Conservation Targets of TIWS provide the foundation for both designing specific management interventions by either enhancing them or reducing their respective confronting threats. Such an approach also allows for setting out a clear monitoring framework for testing whether or not the deployed conservation efforts are indeed paying off. To strengthen ecosystem management at TIWS, therefore, two complementary objectives will be implemented (**Figure D.1.1**): Objective D.1.1 focuses on addressing the threats confronting the prioritized conservation Targets or, conversely, enhancing the respective Targets themselves**.** In order to attain this 'dual' ecosystem management objective, a series of Management targets have been formulated (to address a grouping of prioritized threats), to be supported by respective detailed actions (that will be formulated later on). At the operational level, a three-year Action Plan will have to be prepared in future with a list of the necessary activities, input requirements, responsibilities, and timeframe. Objective D.1.2 involves monitoring of threats to the ecosystem health of Tiwai[65], based on the specific Key Ecological Attributes (KEA) of the identified conservation Targets[66].

Ecosystem Management Strategy Purpose

TIWS's key ecological systems, communities and species monitored, assessed and appropriate management responses taken to mitigate human-mediated impacts and to ensure that its resource values are not impaired

[64] Exact wording for these Target statements may be modified during the preparation of a CMP
[65] See Table C.6 for details
[66] See Table C 49 *Ibis*

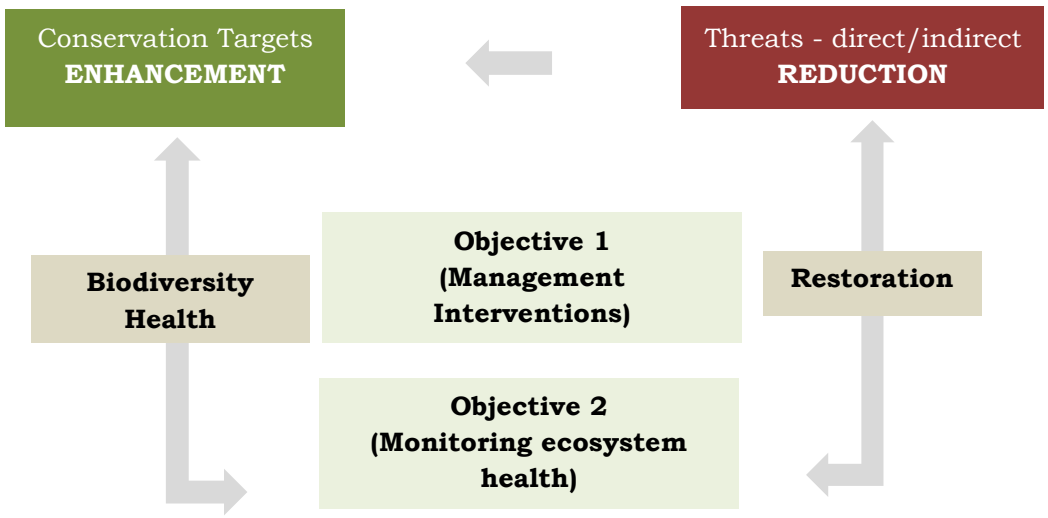


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Figure D.1.1 Logical Framework for Implementing the Ecosystem Management Strategy

Objective D 1.1: The conservation status of Tiwai enhanced and threats reduced

It is desirable that the threats to the functioning of TIWS ecosystem are eliminated and that all conservation components and processes are enhanced or restored to their naturally evolving levels. The assumption here is that the removal of these threats will ensure maintenance of the conservation targets. In certain circumstances, however, it may be necessary to deploy ecosystem restoration strategies for those components impinged heavily by past or ongoing anthropogenic activities. It should be noted that the effective implementation of this objective relies heavily on direct field interventions, hence on the results of monitoring of targets outlined in objective **D.1.2** below. This means that although monitoring will be continuous, setting targets and carrying out interventions will in part be real-time. For instance, if it is determined through monitoring that the infestation level of invasive species has reached alarming proportions, it should be necessary to undertake direct and timely field interventions to control or eliminate them. Specific types of interventions will have to be planned and implemented, including for instance, capacity building, stakeholder engagement or formulation, review and/or application of proper policies or their preparation. In some cases, (such as fire or waste management) mini-technical plans will have to be formulated and implemented as part of this IMP (see **Item G Figure B.2.1**). The specific Targets under this Objectives are listed below:

Plate D.1.1 Black duiker (top) and Pygmy hippo (bottom) filmed by camera traps at TIWS forest in mid-2022.

- Current levels of deforestation of high canopy forest reduced by 90% by 2025
- Current levels of illegal harvests of riverine forest products minimized by 90% by 2025
- Mining incidences in Moa River maintained at the current zero level by 2025
- Densities of monkey species are kept at the 2018[67] or higher levels by 2025
- Rate of poaching reduced by 90% by 2025
- Pygmy hippo population maintained at current level by 2025
- Water flow, quality and aquatic biodiversity of Moa River maintained at current levels by 2025
- Bank erosion of Moa River maintained at natural levels by 2025
- Incidences of wildfires on Tiwai kept to zero by 2025
- All incidences of zoonotic disease eruptions epidemics affecting primates contained by 2024
- Infestation by invasive species on TIWS controlled or eliminated by 2025
- Incidence response system implemented for 100% of disaster incidences by 2025
- 100% of solid waste and wastewater disposed of responsibly by 2025

Objective D.1.2: Management-oriented monitoring and research of key ecosystem values and processes strengthened

This objective seeks to gain long-term knowledge on the state of TIWS's ecosystem functioning, so as to properly inform management decisions (see **Objective D.1.1** above). This objective also builds on, and helps perpetuate TIWS's long-established reputation as a globally renowned research hub for tropical rainforest ecology and animal behavior.[68] While research on specific topics of interest to individual scientists and institutions will continue to be encouraged, particular focus will be placed on developing a standardized framework for monitoring the ecosystem health of TIWS - as a basis for development of a comprehensive ecological monitoring plan (i.e., Detailed Technical Plan - see **D.7**). As much as possible, such a monitoring framework will also address threats at a wider Gola-Tiwai landscape complex, in which TIWS is part.

The TIWS ecological monitoring plan will monitor both its ecosystem health as well as its respective threats confronting the conservation Targets. Subject to the availability of the necessary funding, baseline data will need to be first established, and SMART[69] indicators incorporated together with details on data collection methodologies i.e., how, when, where, and who will collect the data. Baseline data will not only serve for future comparisons but where appropriate, will also help set the Limits of Acceptable Change (LAC)[70] i.e., 'standards' that express levels of use that can be tolerated - with a key consideration being that conservation targets are dynamic in nature. Once the baseline and specific indicators are established, it should be possible to periodically analyze and

[67] See Table C.3
[68] International Research at TIWS commenced since the 1980s - see Table A.1.1
[69] SMART = Specific, Measurable, Attainable, Time-bound
[70] For details, see e.g., Thomas L & Middleton J (2003) Guidelines on Management Planning of protected areas: Best Practice Protected Area Guidelines Series No.10. IUCN. Gland Switzerland and Cambidge.UK.

integrate monitoring information into Tiwai's management decision-making process for enhanced ecosystem management. Within this context, and with regard to the preset conservation Targets and KEAs (see **Table C.6.2**), a monitoring framework will be formulated during the preparation of a CMP with details on baseline conditions as well as on indicators of change, methods of measurement, collection frequency, data sources and responsibilities.

STRATEGY D.2 TOURISM MANAGEMENT

Tourism Management Strategy Purpose

TIWS's tourism developed and managed in order to provide outstanding experience for both local and international visitors, attract optimal economic benefits to the nation, private partners and local communities while having minimal impacts on its resource values

Ideally, conservation in TIWS is expected to pay for itself through internal earnings, the main self-generating revenue stream. However, up until the end of the Sierra Leone Civil War (in 1991-2001) 'core funding' to support conservation and research activities was being externally sourced, mainly from two American Universities[71] but this has since ceased. Meanwhile, visitations by both tourists and foreign researchers and the corresponding revenues have remarkably declined. Regrettably, this undesirable financial hiccup has been exacerbated by other factors beyond administrative control: A protracted (1991-2001) civil war, the recuring ebola outbreaks (1990-1992 and 2001-2001) and most recently, the eruption of COVID-19 health pandemic. Average visitations over the past five years (from 2018 to 2022) amounts to only 400-600, projected to reach 2000 according to CoMP 2020-2030. Tourists typically stay one or two nights on average, equivalent to some 1,000 visitor-nights per year. About 80% of visitors are foreigners who pay $30 per person per night while the balance is made by the local visitor category, who pay a token $10 per person per night.

Plate D.2.1 Group of Tourists at TIWS

Cumulative annual gross income from generated park fees from 2018-2021 totaled US$ 14,395 of which US$ 3,872 was distributed to local communities under the benefit sharing arrangement. Core spending, totaling US$ 17,728 – including grant funding raised from other sources has been on environmental education, sustainable agriculture projects and infrastructure improvements in eight (8) surrounding villages. In any case this revenue base contrasts sharply with the nature and scale of funding needed to support its daily (co-management) operations. Considerable

[71] See **Table A.1.1**

expenditure is necessary to, for example, ensure security for visitors, and installation, rehabilitation and maintenance of services, facilities or infrastructure as well as for supporting socio-economic needs of local communities.

It can be reasoned that the historical low funding profile has and will continue to reasonably sustain the management of Tiwai in the foreseeable future until a CMP is prepared. However, in view of addressing its full-fledged list of management targets as proposed in this IMP, more funding will be necessary. At present, visitor numbers are slowly growing, in parallel with increasing awareness on the Island's tourism significance and recovery of movement -post Ebola and CoVID, respectively. Importantly, however, is that almost all stakeholders consulted during the management planning process acknowledged the need to optimize and sustain the balance between ecotourism and conservation. This is critical in order not to irreversibly degrade the ecological condition of the island on which the very tourism depends. As such, the implementation of this Tourism Strategy will embrace the precautionary principle[72] to conservation.

This Strategy seeks to develop and manage tourism sustainably at TIWS in order to provide an outstanding experience for various visitor segments while generating the much-needed revenue optimally. In particular, it seeks to enhance, diversify, and optimize well-spread visitation so as to continue maintaining the wilderness character of the sanctuary and its tourism opportunities. This way, the economic returns of tourism will also be optimized for the nation and for a multiplicity of other beneficiaries including the local communities while maintaining the environmental tranquility of the Island. As such, this strategy has also been formulated in close adherence to the relevant national tourism policies and guidelines as outlined in **Section A.3.**

All tourism facilities and activities will have to be compatible with TIWS's conservation objectives and be regularly monitored to ensure environmental sustainability. In this respect, only those types of tourism activities that contribute to the understanding and appreciation of the sanctuary resources while minimizing impacts on it will be permitted. To ensure this, a set of principles have been considered including diversification of visitor experiences, appropriate location of visitor facilities (based on the concept of Management Zoning Plan - MZP[73]), learning experiences for visitors, and partnership and cooperation with stakeholders. To realize this strategy, the following four objectives have been formulated:

Objective D.2.1 Visitor access and use developed and enhanced in environmentally appropriate and sustainable ways[74]

[72] The Precautionary Principle states that where there are threats of a serious or irreversible environmental damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent the degradation – see IUCN (2008) 16 p.19 *Ibid*.
[73] Management Zoning Plan refers to the application of a variety of different management objectives or practices in an organized manner in the same area. It provides a practical means of establishing the concept of LAC. Details at IUCN (2008) p.22 *16 Ibid*.
[74] Environmental sustainability will have to be ensured through formulation of Sanctuary-wide regulations such as Tourism use, impact regulations and Code of conduct for visitors. These will be formulated during the CMP.

It is intended to have TIWS visitors to as much as possible enjoy the full spectrum of its attractions including wildlife and its beautiful variety of habitats in their secluded and full wilderness environs. To achieve this, two complementary targets areas have been formulated:

- Tourism-related disturbance incidences on wildlife populations maintained at the current lower levels by 2025
- 100% of attractions accessed by tourists in environmentally responsible ways by 2025.

Objective D.2.2 Visitor facilities improved in order to provide optimal tourism experience with minimal environmental impact

Development of visitor facilities is set to meet expectations of the different segments of visitors on TIWS, in terms of both space and quality. Facilities are thus expected to as much as possible be developed in accordance with zonal prescriptions[75], so as not to compromise the ecological or visual integrity of Tiwai. The two management targets to achieve this objective are:

- 100% of newly constructed visitor facilities comply with preset tourism quality standards and environmental safeguards by 2025
- 100% of operating tourism concession holders and guides comply with environmental safeguards standards

Objective D.2.3 Interpretation of Tiwai is of high quality

It is intended to manage visitors so that they easily access relevant and high-quality information so as to as much as possible enhance their understanding and appreciation of the Tiwai's resources. In this way, they will be clearly and appropriately guided on the appropriate behaviors expected of them as they enjoy the various attractions on the Island. The aim is to nurture their interest in supporting Tiwai as a sustainably conserved world-class tourism destination. To achieve this objective two management targets have been formulated:

- All newly constructed visitor interpretation facilities are built as per pre-set quality standards and located as per MZP by 2025
- All of visitor interpretative material are safe, informative and relevant to the visitors by 2025

Objective D.2.4: Tourism management improved collaboratively with tourism industry partners

The future state of TIWS is one where tourism is effectively managed, in close collaboration with the tourism industry as a whole, to provide outstanding visitor

[75] As per the MZP - to be developed during the preparation of the CMP

experience. To support and inform management actions, administrative systems should effectively coordinate bookings, collect revenue, and monitor environmental impacts of tourism use. This desired future state will be achieved through the following two management targets:

- TIWS integrated tourism management system fully computerized and functional by 2025.
- Communication mechanisms for collaboration with all key local and international tourism industry partners exist and fully functional by 2025.

STRATEGY D.3 COMMUNITY OUTREACH

Community Outreach Strategy Purpose

The support and collaboration of the adjacent local communities in managing and safeguarding the values and integrity of TIWS is sought and consolidated

TIWS is surrounded by eight local communities from the two Chiefdoms of Barri and Koya in the Pujehun and Kenema administrative Districts, respectively. These communities all speak *Mende* as their common language and share the same culture and traditions. Currently, the village-specific and combined population of these communities is quite small, such that they are culturally cohesive, so that everybody seems to know everyone else living within their village premises. According to a verbal exchange with TIWS official (Tommy Garnett) About 80% of their population comprises of the youth (< 25 years of age), implying an active-working evolving populace.

Plate D.3.1 A section of TIWS local community

These communities are almost entirely agrarian, depending mostly on bush-fallow subsistence cultivation for their livelihood. During the stakeholder consultative process, it became apparent that all the representatives of the local communities were fully aware of the operations of TIAC and appreciative of its conservation work and that they were especially keen to continue co-managing it (see **Section A.2**). Despite lack of some clarity on its legal and administrative as well as governance details at the time by especially the youth section, they cherished TIWS's international reputation for wildlife conservation. The stakeholder consultative process identified several outreach areas for strengthening TIWS's management in terms of enhancing an inclusive local stakeholder participation and collaboration. These include improving social services (especially education) and amenities, and provision of various types of capacity building, especially those related to socio-economic empowerment, taking advantage of the ecological and tourism potentials of TIWS. Sustainable harvesting of non-timber forest products and the

Plate D.3.2 Cocoa is a prime cash crop grown by local communities around TIWS

use of traditional knowledge and skills to foster tourism on the Island are case examples. This strategy, therefore, seeks to enhance and maintain the collaborative fabric of TIWS and the adjacent local communities in sustainably safeguarding the diversity and integrity of its values. This means adopting a people centered approach to conservation, by consolidating the already existing historical co-management approach for TIWS[76]. Hinging on the relevant national policies and guidelines (see **A.3**), this strategy also incorporates a set of principles to guide its implementation: co-management of TIWS, good relations with local communities, sustainable benefit sharing mechanisms, conservation and environmental education, and community-based natural resources conservation. Its implementation will be based on the following two objectives:

Objective D.3.1 Neighboring community and local governments support for conservation strengthened

The desired future state of TIWS is one in which the neighboring communities and local governments are fully aware and supportive of the aims and objectives of sanctuary. The following are the targets for achieving this desired state:

- All local community stakeholders adjacent TIWS are fully collaborating in its co-management as per existing guidelines by 2025
- Effective communication mechanisms exist for all prioritized TIWS conservation partners by 2025
- Conservation costs by local communities related to human-wildlife conflicts reduced by 25% by 2025
- Community benefits accrued from TIWS revenue increased by 10% from current levels by 2025
- Conservation education programs established and accessible to all of targeted local community groups

Objective D.3.2 Threats to Tiwai resource values reduced through improved community-based natural resource management in buffer areas and beyond

The desired future of TIWS is where its surrounding community areas are sustainably managed in a manner that supports maintenance of its biodiversity. The management targets to achieve this desired state are:

- Land use practices are fully compatible with sustainable conservation practices of TIWS in 40% of adjacent local community lands by 2025.

[76] See **section A.3** for details

- All of land use practices in the Moa River buffer zone are fully compatible with the sustainable conservation of TIWS by 2025.
- Relevant Traditional Knowledge and Skills (TKS) of the local communities are fully integrated into the co-management practices of TIWS by 2025.

STRATEGY D.4 OPERATIONS MANAGEMENT

The strategic interventions related to strengthening TIWS's operations concerns the enhancement of all day to-day running of the Island, including resources protection, finance and human resources administration and works (infrastructure and facilities). Here, the efficiency and effectiveness of administration and management of TIWS must be strengthened so that it becomes a role model in this regard, nationally and internationally. Tiwai Island is world-famous for its attractive natural resources, but it has also historically sustained some illegal harvesting of its resources - especially through hunting and artisanal diamond mining practices, though these have almost ceased. Between 2017-2022, for instance, only two illegal hunter culprits were apprehended, down from five between 2011-2016 but it is not clear whether or not this is due to increased surveillance or deterrent anti-poaching efforts or that illegal activities have actually declined or a combination thereof. However, signs of illegal activities such as hunted carcasses, poacher camps, gunshots and gun shells within the property are almost non-existent today. Lucrative as it may look, such a conservation outlook is by no means reason enough for laxity. As per the 'precautionary principle', proper resource protection measures should continue to be taken and enhanced.

Operations Management Strategy Purpose

Efficiency and effectiveness of TIWS operations enhanced such that it becomes a role model nationally and internationally

This strategy, therefore, seeks to strengthen the daily operations of the Island, in line with the expected scale and quality of both administrative, tourism and other requirements needed to safeguard its core values and enhance visitor experiences. For instance, it is imperative to improve the working environment for TIWS's staff to enable them deliver with morale and at the highest standards possible, despite the tough and at times risky remote working conditions. This is important so as to guarantee an on-job staff retention and maintain a culture of hard working,

Plate D.4.1 Research Centre Facility at TIWS

Over the years, there have been considerable investment in instalment and maintenance of TIWS's infrastructure and facilities, with forest trail maintenance being of particular

priority. However, facility placing has generally been *ad hoc,* with no reference to any designated spatial planning system. Besides, these facilities and infrastructure have also been frequently devastated by the forces of nature - including tree falls and powerful hurricanes leading to significant financial losses. TIWS will thus endeavor to maintain the existing infrastructure in good order and appropriately locate new ones, guided by the Management Zone process. Infrastructure to enhance security, anti-poaching patrols, tourism and management operations will also be diversified and strengthened. Furthermore, provision of water and electricity as well as telephone communications and internet services for visitors and staff will be prioritized. Due precaution will be observed, however, to ensure any existing and potential environmental impacts related to these developments are properly managed.

The Operations management strategy, therefore, strives to enhance the efficiency and effectiveness of TIWS's operations. In particular, it seeks to align its infrastructure, services and management operations with its purpose, with due consideration to the relevant national policies and regulations related to this area (**see A.3**). Several principles have also been considered in this regard, including protection of resource use, visitor safety, staff motivation, maximization of Tiwai revenues and supplies, improved infrastructure and services, and working with partners. To facilitate implementation of this strategy, four objectives have been formulated:

Objective D.4.1 Natural resources values and human life and property are effectively and efficiently protected

This objective intends to protect TIWS's natural resources as well as sustain an improved safety of its visitors, personnel, and their properties. This would definitely require a well-trained, coordinated, and dedicated ranger force and other staff. Three management targets have been formulated to facilitate the implementation of this objective:

- Poaching incidences in all its forms are reduced by 90% from current levels by 2025;
- 100% of safety threatening incidents for people and their properties are appropriately and effectively prevented or managed;
- Collaborative networks established and fully functioning for 100% by prioritized key security partners by 2025.

Objective D.4.2 Efficiency of TIWS's administrative operations strengthened

This objective relates to strengthening of the human resources component of TIWS's management. The expectation is to have an optimal and well trained and motivated personnel, who are performing their functions to high level standards and have the necessary finances, facilities, and management systems in place to achieve this. Four management targets have been formulated:

- All staff are well motivated to perform their duties by 2025.
- All staff perform their duties professionally and with high degree of performance by 2025

- Staff recruitment level reaches 90% of the optimal requirements by 2025
- TIWS internally generates 80% of its budgetary requirements by 2025

Objective D.4.3 TIWS infrastructure and service standards improved

It is desirable to have appropriate and well-maintained infrastructure that will enable provision of standard services at TIWS. This way, tourism experience will be enhanced with a consequent optimization of both visitor numbers and revenue, without necessarily compromising the conservation status of the Island. To achieve this objective, the following targets have been formulated.

- Forest trail network is passable with ease 90% of the time by 2025
- All visitors and staff are served with reliable, adequate and quality water and electricity 90% of the time by 2025
- Internet connectivity of adequate strength is available on Tiwai 90% of the time by 2025

Objective D.4.4 Local, National and International collaboration in the long-term conservation of TIWS and of the wider ecosystem strengthened

Although TIWS is an isolated island, its operations will not remain secluded forever - especially so given the ever-burgeoning local community populace that continue to squeeze its boundary. Both neighbors in close proximity to TIWS and those beyond are somehow interested in its future. The Sanctuary will, therefore, seek to cooperate and collaborate with interested partners in order to understand their perspectives, expand its sphere of influence and ensure its survival. Its desired future, therefore, banks on ensuring that the full spectrum of its key stakeholders within the broader ecosystem is coordinated to strengthen its conservation and its broader landscape over the longer term, upon which it functions. One target has been formulated to support this objective:

- Collaborative mechanisms established and fully working for all prioritized ecosystem-wide and other conservation partners by 2025

E: MITIGATION OF ENVIRONMENTAL IMPACTS OF MANAGEMENT STRATEGIC INTERVENTIONS

In certain instances, the implementation of the four TIWS strategic management options described in sections **D.1-D.4** may likely generate environmental impacts of various nature and scales. The strategy-specific anticipated environmental impacts together with considerations on the appropriate mitigation measures will be fully addressed during the preparation of the CMP.

Appendix I: Phase I consultations with eight host communities[77]

DEVELOPMENT OF A MANAGEMENT PLAN FOR TIWAI ISLAND:

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Draft 0.4, 13th October 2019

BACKGROUND

Tiwai Island is a large[78] (12 sq km) island in the Moa River. The river forms the boundary between the Eastern and Southern Provinces, Kenema and Pujehun Districts. There is no permanent settlement on the Island and ownership has been shared between two Chiefdoms; Barri (in Pujehun District) and Koya (in Kenema District) for many years. This sharing of control between Chiefdoms is believed to be unique in Sierra Leone. Eight communities (5 in Barri and 3 in Koya) are considered to be the "host" communities, the more southerly communities have access to the islands downstream of Tiwai that are also uninhabited but economically exploited.

The rich biodiversity of Tiwai Island was identified almost 40 years ago and the host communities have been encouraged and supported in preserving this by a variety of organisations and in a variety of ways. A very brief time-line is provided below:

Date	Activity
Mid -1970	The biodiversity value of Tiwai is identified by researchers based at Njala University. A very dense and diverse primate fauna was observed[79]; other West African endemics such as the pygmy hippo were also proved to be present.
Late - 1970s	Discussions start with the two Paramount Chiefs, especially V.K. Magona the VIth of Barri about reducing hunting and other exploitation on the Island
1987	Tiwai Island is given legal protection as a "Game Sanctuary"
Late-1980s	The "golden age" of Tiwai Reserve, two American Universities, Hunter College and the University of Miami provide significant support to researchers on the Island (resulting in several ground-breaking papers led by Oates, Whitesides, Fimbel etc). A Research Centre is established by Njala University and a Tourist Camp established with American funds (although the number of tourists unknown).
1989	A draft management plan is written by a Peace Corp volunteer using the American style of zoning. The management plan envisages limited economic exploitation (farming, logging etc) under the control of a "Supervisor". The extent to which the full plan (~100 pages) was

[77] Adopted from Tiwai Co-Management Plan 2020-2030.
[78] Tiwai means "large" in the local Mende language.
[79] The diurnal primates are: Diana monkey (*Cercopithecus diana*), Black-and-white colobus (*Colobus polykomos*), Red colobus (*Procolobus badius*), Chimpanzee (*Pan troglodytes verus*), Olive colobus (*Procolobus verus*), Sooty mangabey (*Cercocebus atys*), Campbell's monkey (*Cercopithecus campbelli*) and Spot-nosed monkey (*Cercopithecus petauristabuettikoferi*).

	discussed with the communities is unclear, the plan was never formally adopted and fortunately farming and logging did not restart.
1980's	Documentary "Island of Apes" produced for Anglia TV (UK)
1991-2001	Sierra Leone Civil War. Researchers and Peace Corp volunteers were evacuated very early on in the war as Tiwai is close to where the insurgency started. Very high levels of poaching occurred during this period. Minimal financial support was provided from outside the area through the Department of Forestry.
2000	First visit to Tiwai by staff from the Environmental Foundation for Africa (EFA).
2002	Re-establishment of TIAC (Tiwai Island Administrative Council) with input from line Ministries (Forestry, Tourism), Local Government (MP's, District Councillors), Traditional Authorities (Paramount Chiefs), Academics (Njala University) and NGO's (EFA).
2004	Work by Bakarr suggests primates such as Campbell's monkey are now at 10% of their pre-war numbers.
2002-2006	Funds obtained from Critical Ecosystem Partnership Fund (CEPF), UNHCR and Irish Aid are used by EFA, partnering with Njala University, to reconstruct and restore the biological research and ecotourism facilities on the Island, provision of a boat etc. Pre-war funding bodies (i.e. Hunter College and Miami University) appear unable or unwilling to re-establish ties with Sierra Leone.
2006	Official re-launch of Tiwai as an ecotourism destination and site for research
2002-date	Numerous development initiatives are developed and implemented with varying degrees of success and not all are "branded" as being due to TIAC. Examples include; two of the culvert bridges on the road from Potoru – Kambama (funded by GTZ), the school at Kambama (funded from visitor income), Solar power for lighting and charging in all Tiwai Communities and the schools and clinics in their chiefdom headquarters Potoru and Boama (funded by EU). Agricultural development (e.g. Food Security and Economic Development – FoSED – funded by European Union, implemented by EFA and WHH). Eco-tourism development, employment of locals in guiding and supporting tourism, boatmen, construction and maintenance of facilities, cooking for visitors and assisting researchers, etc.
2013-2014	The need for a new management structure is identified; work is undertaken by Environmental Resources Management Foundation, UK on a "pro-bono" basis and an eco-tourism management plan is drafted by an EFA intern. Extensive discussions are undertaken internally and externally, but a number of serious issues remain unresolved.
2014-2015	Ebola crisis. Zero income from visitors. EFA and partners mobilise some resources for the communities (rice and cash).
~2015	By this time attendance and input from most members of TIAC has dwindled, to the extent that EFA and the two paramount Chiefs are the only active members.
2015-2016	Major storm on Tiwai Island causes extensive damage to building and various equipment including solar lighting at the visitor / ecotourism

	camp. EFA mobilises funds and works with local community to rebuild the structure and restore the services
2017	Major storm causes extensive damage to buildings at Field Research Station. A CDC grant enable Njala University to repair, refurbish and upgrade the facilities at the field research station.
2018-2019	Funds are obtained from USAID, through WABICC, RSPB and Gola National Park to commission consultants to prepare a new management plan Consultants appointed.

DESIGN OF THE CONSULTATIONS

The "call for expressions of interest" envisages a two-stage process of consultation:

- Consultation with the primary stakeholders, that is, the people in the eight host communities
- Consultation with the secondary stakeholders, some of whom have demonstrated a long-term commitment of resources to the Island, others are merely stakeholders "by assertion".

This report highlights the process and findings from the first phase of community consultations and will feed into the development of a management plan for Tiwai Island.

HOST COMMUNITY CONSULTATIONS

Consultations were undertaken in August - September 2019. As this is the height of the rainy season, access to some communities was difficult but all communities were visited. Interviews and discussions were primarily undertaken in Mende (the local vernacular) and to a lesser extent in Krio (the *linga franca*). A small device was used to record all the conversations (with the consent of the respondents), however, these recordings have not been transcribed or translated and only small fragmentary quotes are available.

Consultations consisted of:

- Key informant interviews (40 people, five from each of the eight communities),
- Focus Group Discussions.

"Key informants" were defined as;

- The Town chief / section chief
- Women's Leader/Chairlady
- Youth Leader
- An Elder
- Imam

Note that this definition of a "key informant" does not include the requirement to be knowledgeable about Tiwai or its recent history or to have benefited directly (eg being a guide) or indirectly (eg being given improved seeds through FOSED), or to have been specifically disobliged by any of the external actors over the last ~40 years.

The FGD were well attended and the numbers supplied below.

COMMUNITY	MALE	FEMALE	TOTAL
GEIMA	32	37	69
KAMBAMA	33	08	41
JENE	27	36	63
SARHUN	59	39	98
NIAHUN	52	53	105
MAPOMA	39	39	78
BOMA	24	31	55
SEGBEMA	05	01	06
TOTAL	**271**	**244**	**515**

At the start of the meeting, the consultant explained the purpose of the meeting which was geared towards the development of a management plan for the Tiwai Island Wildlife Sanctuary. Questions were asked by members of the team and later the audience in turn asked questions or made contributions, so that to a large extent the sessions were interactive.

FINDINGS FROM THE INTERVIEWS AND DISCUSSIONS IN THE VARIOUS COMMUNITIES

SECTION 1 - KNOWLEDGE AND AWARENESS OF ACTIVITIES AND OPERATION OF TIWAI ISLAND

Q1.1 Awareness about Tiwai Island Wildlife Sanctuary

The is a high level of general awareness about the existence and operation of the Tiwai Island Wildlife Sanctuary and the role TIAC is playing, but most of the communities expressed their concern over the perceived declining influence of TIAC in the running of Tiwai Island. There is a tendency to assume that TIAC is primarily Mr Tommy Garnet of EFA and so all the blame for things they perceive are not going well, are placed on him rather than on the non-attending members of TIAC. Most of the respondents indicated that they have known about the TIAC initiative since its inception in 2002. For those who were born after it started, they said that they had been aware of it since they were very young.

Most of the elderly people in the communities have visited the island, but they visited when the island was not under any management and was being used for various activities, particularly hunting and farming. Almost all respondents in the communities have visited the island because they wanted to know what was happening or because they were working there in one capacity or the other. Open meetings are held at least once per-year to explain what had happened and where the funds had been spent etc.

Response from the elders in all communities was that “informed prior consent” was obtained during the negotiations for the declaration of Tiwai Island as a Wildlife Sanctuary. As the Sanctuary was legally declared in 1987 many of the younger respondents were not yet born or were too young to take part in the negotiation. In general, there was consensus among communities that they were consulted about the Sanctuary prior to the intervention by government in 1987 and there was a general

acceptability of this legal status as a Game Sanctuary, and the terms and conditions of its implementation. However, a significant proportion of the people expressed their dissatisfaction over how activities were being handled, although some of their perceptions were observed to be based on limited or absence of personal gains rather than a fair reflection of the benefits to the communities as a whole.

Q1.2 Involvement in the activities on the island before and during the Tiwai island Programme

All respondents and communities admitted that before the 1980's the Island was used for farming, hunting, collecting NTFP, logging, fishing and some small-scale mining, but suggested that none of these are going on now in the island. Observation suggest that hunting (poaching) is still a problem and exploratory mining pits occur fairly regularly. Many of the youths said that they have been involved in activities on the Island one way or another; eg: cleaners, patrol guards, cooks, tour guiding, boat operators etc. Many also know other people within their communities who have also been involved and those who are still working on the Island.

Q1.3 Knowledge and perception about TIAC and its management of the island

Most of the respondents know about TIAC. There is a general feeling that TIAC was effective initially, but their operations have declined over the last five years.

A good number of community people reported that they have attended one or more of the meetings called by TIAC (or by Tommy Garnett as most people perceived), whenever there is issue of interest to the community and in a few instances for the purpose of distributing benefits to the communities. The number of meetings organised by TIAC for various purposes is perceived to have declined since the 2014-2015 Ebola crisis.

Most of the communities think TIAC's operations have been good for the island, but a vocal minority have negative perceptions. In two communities (Jene and Geima) there was unanimous agreement that TIAC's operation in the island has been good for the island. In other communities there were mixed opinions and perceptions about the impacts of activities on the island.

Q1.4 The impacts and benefits of the Tiwai Programme to local people and their communities

Most respondents think activities on Tiwai Island have not significantly improved their livelihoods, but some of them acknowledged that they have been directly or indirectly employed by TIAC and are obtaining alternative livelihood opportunities.

It was agreed by many respondents that community projects undertaken by the TIAC have brought benefits to their communities. Some of the community projects mentioned include construction of school classroom block, solar charging station (from which funds were raised for the community), the construction of water well in all communities and the construction of Guest Houses in five communities. However, a few people were disgruntled over the sustainability of some of these projects, because according to them, the solar changing station broke and none of the revenue had been saved for repairs,

some water wells need rehabilitation, more schools should have been built by now and more scholarships given to their children.

For most of the respondents, their perception of indirect benefit was misconstrued and so could not give appropriate answers. Some of those who could appreciate what indirect benefits are indicated that the continued existence of the Tiwai Island forest as a result of the intervention of TIAC is good for them. The services that Tiwai Island is bringing to them includes tourism, the provision of seedlings (e.g. cacao) and seed rice through alternative for their farming and the construction of a jetty at Kambama which has enhanced transport to other villages in the Tiwai environs.

A good proportion of the people were positive about the impact of the programme on the state of the island, yet there were some who were dissatisfied about the current state of the island simply because they have limited access to the island. The dissatisfied suggest that more youths should be employed and there should be greater community representation in the management planning of the island through the Tiwai Communities Committee (TCC) and their local chiefs and elders.

Q1.5 Knowledge about the legal status of the Tiwai Island

The general response to the issue of legal protection of the island was that the communities know that it is a protected area under the jurisdiction of the government of Sierra Leone. None of the individual respondent or community consultation refuted or rejected the protected status of the island and they are willing to accept and continue with that arrangement.

FUTURE ENGAGEMENT FOR THE MANAGEMENT OF THE ISLAND

Q2.1 The future of Tiwai Island Advisory Committee

Most of the respondents are of the opinion that TIAC should be transformed or evolved into a more operational entity, mainly involving people within the local communities. Some of the reasons given for the need for transformation of TIAC are as follows:

- should be more inclusive,
- should share more information more regularly,
- should concentrate less on secondary stakeholders in Freetown and more on the local communities.
- Should include local businesses such as Carma Cola and their Tiwai Communities Committee.

Q2.2 Willingness to be involved in the management of the island

All respondents expressed a willingness to be involved in the management of the island; the elders would like to serve as Chairmen and advisors to the activities whilst the women and young people would like to be actively involved as representatives of their respective communities and gender groups.

Q2.3 What needs to be done to create effective management

Unclear.

Q2.4 Things that Tiwai programme needs to do differently to enhance the management of the island

- TIAC or its proposed new form should be inclusive of all interest groups within the communities and other peripheral stakeholders, such as Carma Cola and the TCC. This will ensure that community development could be handled collectively and the impact be spread over all communities.
- Provide more employment opportunities to the young people especially as tour guides, patrol guards and skilled works (masonry, carpentry etc.).
- Sustainable alternative livelihoods should be provided, as compensation for the loss of potential livelihood from the island from farming, hunting and mining.
- Funds meant for community development or any other benefits should be distributed to communities based on their proximity to the island, because some of these communities are not directly connected to Tiwai, such as Niahun and Sahun.
- Access to micro-finance and other opportunities should be part of the community development initiatives, especially for women.

Q2.5 How the communities think they can be involved in the Management of the Island.

- The community should be part and parcel of the management at all levels of the operations of the island, including the advisory community down to the operations committee.
- Community representatives should be at the entrance to the island to monitor and record numbers and payments made by visitors to the island in order to ensure transparency and accountability in the management of the funds.
- The local chiefs or elder should be the key means by which information can be transmitted to their respective communities.
- The communities should be allowed and facilitated to develop and enforce bye-laws to protect the island and deal with any encroachers

Q2.6 How the local community heads should be involved in the management of the island.

The response to this question was consistent across all communities visited. The key points are:

- The community heads would like to be member and/or chairmen of the management committee or subcommittees;
- They would like to be involved in the management of the funds raised from entry fees to the island or any externally funded projects, and decisions on how these funds are utilised.
- Be responsible for managing the funds for maintenance of facilities in and around the island and on setting and paying wages to local employees.
- As custodian of the customs and traditions of the people, the elders should be directly in the development and implementation of bye-laws for the effective protection of the biodiversity of the island.

Q2.7 How the youths of this community should be involved in the management of the island

The youths would also like to be fully involved in the management and day-to-day running of the island because they are the potential law breakers. They want be employed as forest guards and wildlife rangers to be able to earn their livelihoods instead of being involved in illegal activities.

Q2.8 How the women should be involved in the management?

The women would like to be represented in the management committee of the island as a way of ensuring gender representation and that their concerns are addressed, as access to micro-credit facilities and skills training opportunities. The women admitted that they use to house poachers and so for them to be involved in the protection and management of the island they should be employed as cooks, cleaners and even tour-guiders.

Q2.9 How should Government be involved in the management of the island.

Respondents think that government officials, through the Forestry Division should be included in the management team with the key purpose of implementing and enforcing government policies on conservation of wildlife. However, there is a general perception that government officials should not be included in the day-to-day running of the affairs of Tiwai island. Also, government should provide armed security as a means of dissuading potential poachers and encroachers into the island.

Q2.10 The problems and challenges the communities think the TI management could have in future

- Poaching is still a threat to the island, according to most respondents, no matter the mechanisms put in place to protect the island.
- The ownership of the island could be a key problem in future because some communities wish to remove some of the other communities from the group.
- The potential chiefdom dispute that may emerge from issues of ownership and rights to the island by people from the two chiefdoms of Barry and Koya.
- The potential problem posed by TCC for control of the management of Tiwai as a rivalry to TIAC.

Q2.11 How the communities think the problems and challenges could be addressed and what mechanism do you think should be followed.

- The local people should be given rights to arrest and prosecute poachers and encroaches with full support from the police.
- Permanent staff, mainly community people, paid by government as part of the forest and wildlife rangers assigned to the area.
- The issue of the ownership of the island should be resolved on the basis that each chiefdom agrees to work in collaboration with the other, with the primary objective of ensuing that the Tiwai island in conserved for their collective benefit and that of posterity.

GENERAL OBSERVATIONS AND COMMENTS

During the interviews, individual respondents and groups of people were willing to talk about the issues and expressed themselves freely.

It was clear that the people do not know the difference between TIAC and EFA (represented by Tommy Garnett). There is a general perception that Tommy Garnet controls TIAC and does things the way he wants, which may be due to lack of understanding of the roles and responsibilities of the other institutions and individuals that constitute TIAC, and often their non-appearance.

There seems to be some antagonism amongst the communities in the two chiefdoms, as there is still some silent dispute about ownership of the Island. According to some speakers, some of the elders of Barri chiefdom claimed that Tiwai Island lay entirely within Barri not Koya and only the more northerly communities of; Kambama, Niahun, Jene, Sarhun and Boma have rights to the Island. From the discussion it was observed that some of these people, especially local leaders may wrongly perceive that considerable outside influence and money might be flowing coming into Tiwai island management and so want to exclude the other communities from such benefits.

There is also some misgivings about EFA among the local communities. Before the rebel war, Tiwai benefited greatly from "core funding" provided externally, since then activities have been limited to the surplus from the paying visitors. The perception is that there were many more opportunities when core funding existed, and the economic realities of a sustainable self-supporting system are not clearly understood. There is a belief that Jene and Kambama benefit disproportionally from employment opportunities, and that EFA is not offering an equal voice to these other communities and they are excluded in the management structure.

One strong antagonist to the work of TIAC is the chairman and Leader of a newly formed group known as Tiwai Communities' Committee (TCC). This particular antagonist wants the management of Tiwai to be entrusted to himself as leader of TCC, but much of his response were in variance from the facts on the ground. A general observation is that there was inconsistency in the responses by a number of respondents to questions relating to benefits and community participation.

Appendix II: Phase II consultations, Report of Focus Group Discussion

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1.0 INTRODUCTION

This report describes the second phase of community consultations geared towards the development of a co-management plan for the Tiwai Island Game Sanctuary (TIGS), and therefore will be included as an addendum to the first report. The first phase was focussed at getting the perspective of each of the eight communities associated with the TIGS, during which individuals within these communities were interviewed followed by collective group consultations with key members at each of the communities. The report has been submitted to TIAC and subsequently to RSPB, the coordinators of the project.

This second phase of consultation was done at the chiefdom level. Two tiers of consultations were held with each of the composite representatives from each of the communities in the two chiefdoms of Koya and Barri, respectively. Firstly, focus group discussions were held for each of the following categories of representatives from each of the communities with chiefdom: (i) the community chiefs and leaders; (ii) the women and (iii) the youths and young people. This was then followed by a collective consultation with all members from all communities in the same chiefdom.

The general observation from these consultations was that the issues that emanated from the first phase of the individual community consultations were consistent with those from the second rounds of consultations. However, though there were a few agitated individuals who attempted to sway the discussions towards personal grievances, the rest of the community representatives were very cooperative and showed great willingness to participate and contribute to the discussion. The contributions were open and frank and effort was made by the consultant and facilitators to diffuse all potentially volatile arguments.

The consultations were held at two locations, respectively, for the following chiefdoms and communities:

Potoru Town:Barri Chiefdom – 23rd October, 2019.

Kambama Town: Koya Chiefdom – 24th October, 2019.

2.0 TIWAI ISLAND GAME SANCTUARY MANAGEMENT: LOCAL COMMUNITY'S PERSPECTIVE ABOUT THE PAST TO PRESENT.

2.1 Awareness of Tiwai Island Wildlife Sanctuary and Operations of TIAC

In each of the consultations with the individual groups and the communities there was a general awareness and acceptability about the operations of the TIWS in the area. There is however some discontent among some of the local people such as: (i) that the agreement that was made with their traditional leaders needs to be reviewed, taking into cognisance current economic situation and other potential players and investors in the running of the island; and (ii) that the island is to be protected against poachers and miners since the island used for wildlife purpose, because as alleged, people are coming from outside the area to poach and mine.

It was clear that every representative of the local communities was aware of the operations of TIAC. There is a general perception that TIAC as managers of the TIWS would have been able to perform well to the satisfaction of the local communities, but for the influence of EFA on TIAC team. From discussions only some individuals within the local communities share this view, which may have emanated from seeming lack of transparency on how resources and finance have been shared by EFA (representing TIAC). They cited the infrequency meetings in the last several years and that the two community representatives in TIAC were no longer invited to the meetings. According to the local people these two representatives were very instrumental in providing updates to the communities and operations of TIAC, including job availability, planning community engagement and participating in the distribution of resources and finance. Now that TIAC is hardly meeting and community representatives are no longer in touch with them, thus the general suspicion that TIAC, under the influence of EFA is not being transparent accountable in their operations.

There was also a semblance of disagreement among the traditional leaders about the operations of TIAC. Some alleged that TIAC has shifted its focus more to certain communities which has led to inequitable distribution of resources and attention in affected communities. However, the caretaker chief of Barri Chiefdom indicated that he has served as secretary to TIAC and so has been attending the meetings, although he admitted that it has been over five years now since meetings were held. The lack of meetings of TIAC, which should have included local leaders and the respective chiefdom representatives was the key issue raised by the communities over the operations of Committee.

2.2 How the Tiwai Island project affected the livelihood and activities of the communities.

The response from the different community groups to this question was mixed, but the nature of the answers was not diverse. Whilst there is common understanding that the TIWS has brought considerable benefit to their communities, they are still aggrieved about the lack of access to farming on the island and non-compliance with the original

promises that was made over compensations to the communities. Some of the benefits cited are as follows:

- provision of solar powered facilities (though now defunct) which was helpful to their children's study and was used to charge their mobile phones;
- Rehabilitation or construction of at least a school, guest house, mosques or palava huts in each of the eight communities, respectively;
- The provision of rice seedlings for some communities.
- Direct cash payments were made every year as proceeds from the tourism on the island, to address other community needs.

2.3 Community's Perception about the current state of Tiwai Island and the direct and indirect benefit of the conservation the island to them and posterity.

The majority of the chiefs, women and youths admitted the importance of conserving Tiwai Island and the ecosystem service and existential benefits it accords to the area and surrounding communities. They also admitted that without management of the island by TIAC, the island's ecosystem would have been decimated through farming, poaching and mining for diamonds and so the benefit being enjoyed by the local communities would have been lost . They believe that if the Tiwai Island Forest is properly conserved, their children, grandchildren yet unborn will be educated enough to handle the affairs of the project even after TIAC may have exited in future. Also, most of the women and youths believe that if the management of the island is left in their hands, they will enjoy more benefits. They look forward to the day when TIAC would hand over the affairs of the island to the local communities, but agreed that with a greater involvement of other stakeholders and investors, the potential for community development could be huge.

All the community focus groups were dissatisfied over the recent decline in the activities of TIAC on the island, which they said has led to the general feeling that TIAC is losing their influence on the island. However, they believe that a more inclusive version of TIAC would trigger greater acceptability and collaboration among local communities. This is because some sections of the community representative do recognise and support the work of other organisations that run programmes in the Tiwai communities, including Carma Cola and Tiwai Island Community Committee (TCC).

2.4 Knowledge and acceptability about the legal status of Tiwai Island among local communities

Tiwai island was made a WildLife Sanctuary in 1985 through facilitation by John Oates. According to the provision in the act the Tiwai Island wildlife or game sanctuary was declared through the consultation and agreement with the chiefdom council and local communities. However, most of the local people who were involved in the negotiations and were signatories to the agreement are now deceased and the younger generation think that a review of that agreement is long overdue. The communities still recognise

the legal protection of the island as given in the 1972, but would like to see greater protection with greater roles played by the local authorities and the people themselves. In fact, the youths and young men suggested that if government could engage and train wildlife rangers from members of the local communities, there would be greater effectiveness in the protection of wildlife in and around the island. The youths know the area better, including the entry and exit points better, can easily identify internal and invading poachers and so should be able to handle the situation more efficiently. In addition to government appointed rangers, local guides should be trained across all communities, to support the surveillance and monitoring mechanism for the protection of the wildlife on the island.

3.0 FUTURE ENGAGEMENT ON TIWAI ISLAND BY LOCAL COMMUNITIES

3.1 Community's perspective on how the Tiwai Island should be managed in the next 10years

The local leaders, women and the youths recognise the importance of the Tiwai Island as a place where variety of plant and animal species exist and are being conserved either for ecosystem services, tourism and research purposes. They therefore expect more robust ways of protecting the reserve and making it more attractive to visitors. Some even talk about expanding the potential of the island by the introduction of different species of animals that are not common in Sierra Leone; although this was said out of ignorance of the consequences it might have on the local ecology of the island, which none of the local people seems to understand.

The consultation also revealed that there is a wealth of local knowledge among each of the target categories in the focus group in terms of plant species and the wildlife of Tiwai Island. This knowledge base only requires some further training to enhance individuals within the local communities to engage in research and monitoring, and in tour guiding. Also, as it used to happen in the early days of the operations of the sanctuary, many community people were engaged in different forms of non-skilled labour on the island, including brushing of the trails. They believe that many more such opportunity exists on the island, especially after the construction of the research and dormitory facilities for which the local young people should be employed.

There was a unanimous affirmation of willingness by all community groups to be involved one way or the other on the management of the island. However, some of the women are not particularly enthusiastic about working on the island because of their traditional engagements, but would like to have a say on the decision making process on how the island is managed. It was clear from the discussion that the communities want to be involved in the following ways:

- The communities should be engaged in supporting the research and monitoring activities on the island and be involved in training opportunities for this purpose.

- Be engaged in the daily management activities for the island, including skilled labour (e.g. keeping the accounts books and tour guiding) and unskilled labour (e.g. cleaning of trails and keeping the dormitories).
- Some community youths should be appointed into government service by NPAA or Forestry Division to serve as rangers assigned to the Island.

- Inclusion in the management committee for the island, in whatever form it might take; particularly the chiefs and TCC to be recognised as important stakeholders within the new management arrangement.

- To establish a skills training scheme for youths in various fields of technical trade. It was clear that youths in the Tiwai Island communities are unemployed and untrained, and so the lack of training opportunities was a key concern during the discussions. Areas of training highlighted were carpentry, masonry, craft making, gara tying and dyeing, weaving, tailoring, solar light technicians, wildlife ranging and tour guiding. This will ensure the availability of local expertise whenever such employment opportunities arise at Tiwai Island. It will also create opportunities for self-employment for the youths and young people in these communities. In some of these trades, training should be followed by the provision of start-up kits.

- The women and the youths expect that the co-management arrangement will consider the establishment of a cooperative and micro-credit scheme, to enhance their livelihood base and improve the living standards for them and their children. They constitute the most active working population in these communities.

- TIAC or its new structure must have representatives from each community, other than the paramount chiefs. Alternatively, smaller committees should be established at community level, working in tandem with TIAC (or its new form) and contributing to decision making and running of the day-today affairs of the island.

- Included women in the management committee and engage them in programmes organised by Tiwai management, especially in the area of hospitality (reception, food provisioning and entertainment). For instance they were aggrieved that some other group of women who are not from the Tiwai communities had to cook and serve the food during the consultations, which they think could be better done by them.

3.2 Other groups or stakeholders the community wants to be involve in the management of the island

All community groups were interested in making input into the question of the involvement of other stakeholders in the management of the island. The enthusiasm shown in responding to the question was an indication of the willingness by the local

community to have more players in the management network for the island. Their general perception is that having more players with a variety of roles and/or investment potentials will bring more benefits and job opportunities to the Tiwai communities. Whilst there is a common positive feeling and acceptance of the impacts made by TIAC and EFA, the recent decline in funding for community-based activities is being somewhat interpreted as fatigue on the side of TIAC/EFA to mobilise funding, therefore the need to encourage other potential stakeholders to sustain funding for the island and the surrounding communities. The following are the potential stakeholders proposed by the communities during the consultation:

- AFFA CARMA COLA – an NGO already operating in these communities and is supporting community development activities such as construction of schools and water wells, provision of scholarship for students, direct cash payments to communities and their leaders etc. This NGO buys cola nuts from the communities, which is used in the UK to produce coca cola drink that is effectively marketed sold at a higher cost in the UK because it carries a label indicating the profit goes towards community development around Tiwai Island. The communities people want Carma Cola to collaborate with EFA in an arrangement that would ensure that they continue to support development programmes in the communities, whilst operating as a significant stakeholder in the management of the island.

- TIWAI ISLAND COMMUNITY COMMITTEE (TCC) - The youths, women and some chiefs across the two chiefdoms perceive TCC as an alternative to TIAC. However, some sections of the community representatives admitted that TCC lacks the requisite skills and experience to be able to replace TIAC; otherwise, TCC could be incorporated into the management committee for the island as key partners representing the interest of the local communities.

3.3 Community expectations on the new management arrangement for the protection of Tiwai Island

The issues outlined below represent the collective perceptions of the various categories of representatives that were engaged in the chiefdom level consultations, on what additional things that should be done to ensure effective management of the island:

- Community bye-laws should be developed to compliment government legislation governing a game sanctuary. The implementation of government policy and the community bye-laws should be done across the board and there should be no sacred cows. Previously, only non-indigenes of the area were prosecuted for violating the laws governing the island. This time the community representatives think that no one should be an exception the rules. According to the TCC Chairman, the youths are responsible for most of the problem that is going on in the Tiwai reserve. Therefore, if TCC is recognised by TIAC, they will make sure that

there is effective law enforcement. In addition, members of TCC can be trained and supported with logistics to serve as a surveillance unit for the periphery of Tiwai Island.

- The local traditional heads should champion the development and implementation of bye laws and government policies governing the island. The local community heads (chiefs, headmen, mammy queens) are most respected in these communities and therefore when they make customary bye-laws, nobody will go against it and any defaulter will be punished.

- Punishment for poaching and encroachment should be made stronger and compensation paid to personnel who apprehend violators. For instance, the proposal to pay monetary compensation to people who apprehend any poacher caught with his weapon and presented to authorities, should be strongly considered. Accordingly, such mechanism will encourage intensive surveillance activities with the aim of discouraging poaching and encroachment on and around the island.

- Alternative livelihood programmes be provided, more especially for the youths such as sustainable agriculture, micro-credits.

Appendix III[80] - Consultations with other Stakeholders on Tiwai Island

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- Work started on Tiwai in the early 1980s by John Oates who fell in love with and was passionate about the Island. Initial focus was on the primates and not the people.
- John Oates later convinced the Chiefdom authorities to declare Tiwai a wildlife sanctuary.
- Tiwai was initially a destination for Primatologists, but interest in other taxa soon followed
- The involvement of the Peace Corps led to the involvement of people in ecotourism.
- Peace Corps did zonation for the ecotourism, also did a Management Plan for the island
- Research on Primates almost vanished since the last researcher left during the war
- The Academic partners (Miami, Hunter College, Njala) had their own focus
- EFA in its management tried to develop programs built around people
- Njala established a Functional Research Station
- Njala needs to have a dedicated research team to run Tiwai; they should have committed, and dedicated Field Technicians deployed to the island.
- Need to explore Research Grant mechanism for Tiwai

PROF RICHARD WADSWORTH, DEPARTMENT OF BIOLOGICAL SCIENCES, NJALA UNIVERSITY

- First Went to Tiwai for the 1st time in 2003 during the Mapping Land Cover Project which he was undertaking and has been going there since then
- His impression was that Tiwai is a good new story for Sierra Leone, although there was still problem with poaching but there was no logging.
- Forest has grown, no logging, once on a while there is mining for diamonds. There have been tests/trials pits mainly by outside people. The Primates population have improved substantially
- Though there have been some issues, the general trend is a steady improvement from conservation point of view. EFA has hung in despite challenges and badmouthing. Others came and left within a period but EFA weathered the storm. Accountability has been the key issue for many of the intending and operational groups.

[80] Adopted from Tiwai Co-Management Plan 2020-2030.

- He is presently a member of staff of Njala University and is in charge of research and reviewing research proposals for Tiwai. Those that were not viable, such as one to habituate the monkeys. were rejected.
- In his estimation Tiwai receives over 700 visitors per year The Money generated is used partly for the maintenance of the facilities and the surplus is being distributed to (many) communities. The key people want the money to be shared rather than used for community (local) development. They think mining and logging were more beneficial
- Several attempts to give alternative livelihoods to the communities but these alternative income generation were not viable; NGO intervention was froth with lack commitment and deception from either the entrepreneurs or the committees.
- Cited attempts at Aquaculture training on fish pond construction and also the development of nursery by boat landing site, cocoa etc. the agriculture expert from India that was brought in for making charcoal using bamboo. The Communities not commercially minded
- Thomas Armitt first came to Tiwai to carry out research after which he came back to Tiwai and set up a private company. Carma Cola, which produced a special brand of Coca cola. The label on the Coke is that it is to support poor communities around Tiwai. The coke is sold for a much high price than the normal coke.
- With respect to sustainable management of Tiwai, Carma Cola and other groups needs to work through TIAC, at least on a polite approach to keep others out would not be a good concept.
- For sustainability, Tiwai needs projects. Most projects were short term. There has to be long term commitment from intending operators
- Intervention to be long term commitment e.g., oyster festival in Bonthe.
  - Farmers growing things they do not consume
  - Sponsor coffee and cocoa festival – Coffee tasting/drinking ceremony need to be organized- Open a booth at National/ regional festivals
- A review of funding to communities, motivation to teachers (Bonus) would be better and more effective approach instead of scholarships
- The John Oates factor has also negatively impacted Tiwai. He emphasizes his role in establishing Tiwai and emphasize the role of others. It is our resource not a community resource. Only land-owning families/communities should benefit.

- **For The way forward**:
  - An MOU signed between communities and anybody/ operating entity that want to work/operate around community. The MoU should spell out what their role is etc. it will not be prudent for an MoU to be signed between TIAC and Government as it may trigger political issues.
  - Restructure TIAC. Theoretically fine but practically not functional. The Paramount Chiefs should no longer be chairman of TIAC

- New structure should have 3 representatives from each community, (men, women and youths); such a committee will be too big. Also, Tacugama and Gola Rain Forest to be members of the Committee

- The key management challenge is that for visitors – how to manage increased number of visitors without damaging the environment.

- Other issues to be considered
  - The RSPB factors
  - The Nagoya Protocol
  - The Biosphere Reserve concept
  - World Heritage site
  - Joining Tiwai with Gola
  - Access to Benefit Sharing
  - Developing of Medicinal gardens
  - Plant rattans, etc.; and non-Forest Tree products
  - The need to talk to Carma Cola - business strategy

STAFF OF THE CONSERVATION TRUST FUND (CTF)

- The CTF sees itself as playing a prominent role in the new co-management structure for Tiwai and as such, expect to be included as one of partners in the its members.
- Tiwai is a valuable wildlife and conservation resource. The long-term sustainability of the resource there is a need to establish a Trust Fund.
- Government should cater for the Tiwai Island in terms of providing the following:
  - deployment of rangers paid by government of Sierra Leone
  - covering some of the running and maintenance cost to the island, as part of the functions of the support PAs
- The Conservation Trust Fund, according to the Act, should be responsible to finance projects in PAs, and so would wholeheartedly support the establishment of a trust fund for the island
- NPAA should be involved in implementing projects and programmers, whilst Conservation Trust Fund would be involved in monitoring.
- The CTF will provide expertise and support the development of proposals for resource mobilization and management of island's biodiversity resources.
- The CTF would like to see promotion of investments in the area of the development of touristic facilities such as eco-lodges etc.
- The CTF made the following key recommended inclusion in the co-management plan
  - Inclusion of CTF in co-management structure to strengthen CTF's participation and contribution to the management of the island; so there is need to review the stakeholders' analysis to reflect the role of the CTF.

- Some ideas of what may happen if the co-management time frame expires or the management committee ceases to function;
- Mechanism that would ensure transparency and accountability in the course of implementation of the management plan.
- A trust fund must be set up and will be supported by the CTF.

EXECUTIVE DIRECTOR OF NATIONAL PROTECTED AREA AUTHORITY (NPAA)

- NPAA has a mandate for the protection of all PAs and Tiwai is one of them.
- The importance of Tiwai in terms of Biodiversity cannot be over-emphasized.
- Tourism is now in the forefront of Government's agenda and Tiwai is one of the main tourism destinations.
- The Ministry now requires all PAs to be sending quarterly reports, including report from Tiwai island, once the co-management plan starts operation.
- The Sherbro Estuary Management Plan calls for calls for a Supervisory team (NPAA), An Advisory Team (Paramount Chiefs, etc) and a management team which comprise support organisations. The Management Committee is bounded by a constitution. The NPAA would like to see a similar concept in operation at Tiwai, under the new co-management plan.
- The CTF should raise funds for NPAA and support Tiwai in terms of the employment of rangers, which ideally should be employed from the area.

DIRECTOR OF FORESTRY, MINISTRY OF AGRICULTURE, FORESTRY AND FOOD SECURITY

- Forestry has not been active on TIAC. Forestry has more commitment to show to the conservation of Tiwai and not interested in the material gains of becoming a member of TIAC
- Forestry Division is obligated to play a very important role in the management of Tiwai as the first Game Sanctuary and so happy to function are supporting partners.
- The Forestry Division supports the agreed with the proposed co-management structure, wherein the Division will serve as a secondary stakeholder, and the NPAA being a primary stakeholder.
- A good example worth citing is the Gola Forest co-management arrangement for the management of buffer zones around the national park, which for all intent and purpose is a success story. It is a 3-tier management.
- The Environmental NGOs are only coming in to help, as funding from Government is not forthcoming. Govt should be able to maintain the resources through working with and recognising the interventions by the NGOs and other partners.
- At Gola National Park, there is a tripartite arrangement as follows: (i) Government of Sierra Leone; (ii) Royal Society for the Protection of Birds (RSPB) & Conservation Society of Sierra Leone (CSSL); and (iii) the local communities represented by the Paramount Chiefs from all the seven Chiefdoms around the Gola NP. The Government is represented by the Minister of Agriculture and Food Security. They

meet two every year and the meetings are chaired by CSSL; all major partners should be present for any major decision to be taken.

- The Gola also has a Board of Directors, which is responsible for the day to day running of the affairs of the park.
- There is a special account to which sale of carbon is deposited for the management of the Gola National Park and Loma, which is managed by a company limited by guarantee.
- The Gola National Park administration would be very happy to be involved in the co-management plan implementation at Tiwai Island.